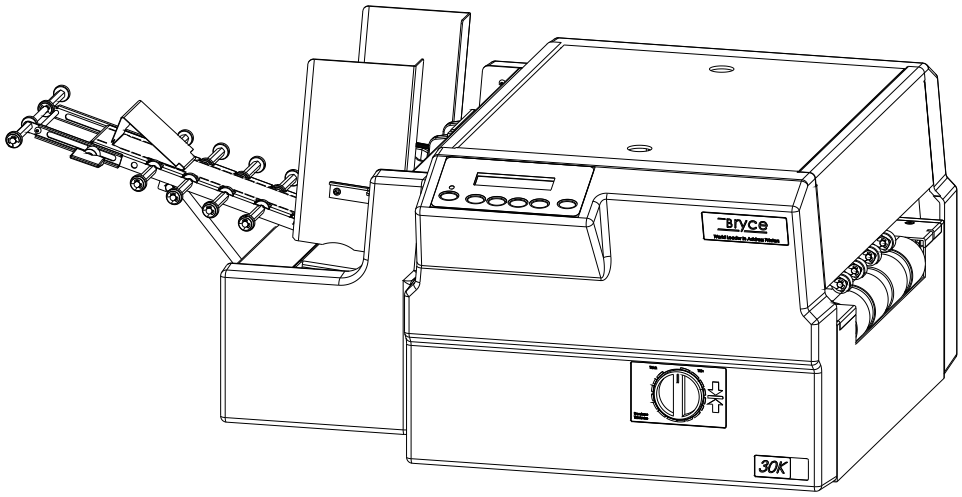
Bryce

World Leader In Address Printers

30K Addressing Printer



Users Manual

WARNING

WARNING: HIGH VOLTAGES ARE PRESENT BEHIND THE COVERS AND IN THE PAN ASSEMBLY.

Never remove the pan access cover assembly or rear cover assembly since there are no user serviceable parts inside. The electrical and/or sensitive parts may only be serviced by an authorized Service Representative.

Important Safeguards :Read all instructions before attempting to operate this equipment.

- To reduce the risk of fire and/or electric shock, do not attempt to disassemble this machine.
- The machine is not intended for use in hazardous locations. Do not use in environments known to contain flammable or explosive gases.
- To prevent overheating, do not cover vent openings or use the machine over a radiator or heat register.
- To reduce the risk of injury, refer all non-operator service functions to qualified service personnel.
- Access only those operator designated areas of machine for jam clearing. All other areas of machine requiring disassembly or removal of covers should only be accessed by qualified service personnel.
- This machine cabinet serves to enclose hazardous parts. If the machine has been dropped or otherwise had the cabinet stressed in any way, report it to your local service representative.
- In the performance of operator service procedures, be certain the machine is unplugged from the wall.
- Do not attempt to use this product in an unauthorized manner. To do so may expose you to mechanical and / or electrical hazards.
- Do not expose power cord to sharp points or edges.
- To protect against shock, the power cord must only be plugged into a grounded receptacle. The ground pin on the plug must never be removed.
- The power cord should be routed so it cannot be walked upon.
- Do not operate this machine with a damaged power cord or plug.
- Unplug or otherwise disable this machine before cleaning.
- Know how to turn off power in the work area, and to summon help in the event of an emergency.
- Do not remove safety covers for cleaning, adjustments or repairs. Call your service representative.
- Keep office supplies such as paper clips, staples, rubber bands, etc., away from machine.
- Keep loose clothing ties, jewelry, and long hair away from moving parts of this machine.
- Ink formulations for use in this machine are critical. Use only those specified.
- **Notice**: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- Treat every circuit as if it were live. Check first with a neon tester or a voltmeter.

Federal Communications Commission Compliance

"This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1). This device may not cause harmful interference, and

2). This device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with FCC Rules Part 15 subpart B Class B for a digital device. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / TV technician for help.

Shielded cables must be used with this unit to ensure compliance with the Class B FCC limits.

Canadian DOC Compliance.

"This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Caution
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.
VORSICHT
Explosionsgefahr bei unsachgemäßem Austausch der Batterie. Ersatz nur durch denselben oder einen vom Hersteller empfohlenen gleichwertigen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.
ADVARSEL
Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri af samme fabrikat og type. Levér det brugte batteri tilbage tilleverandøren.

Notice

The information in this document is subject to change without notice. Bryce Office Systems makes no warranty of any kind with regard to the material contained herein. Bryce Office Systems will not be liable for incidental or consequential damages in connection with the furnishing, performance or use of this material.

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Who is this manual for?

This manual is for the person who is new to the Bryce 30K Address Printer and needs step by step instructions to setup and operate the printer.

The appendix at the end of the manual has information for those who are familiar with the 30K printer and simply want a quick reference or want more specific technical information on the 30K printer.

Section 1 – Printer Particulars
Configurations available for the printer.

Section 2 –Parts of the Printer
Illustrations showing the location of printer components.

Section 3 – Setting up the Printer
Describes the basics of how to setup and install the components of the printer for the first time.

Section 4 –Printer Tips
Additional adjustments and instructions to fine tune the printer.

Section 5 – Running with the Feeder Assembly
Outlines the prerequisites for setting up a non-Bryce feeder with the printer. Also included are step by step instructions to assemble and install the 30K feeder.

Section 6 – Printer Menu System
Explains each of the menu options of the address printer.

Section 7- Troubleshooting and Diagnostics
A list of possible problems you may encounter when operating the printer and their solutions.

Section 8 – Cleaning and Maintaining the Printer
General maintenance steps to keep the printer clean and functioning properly.

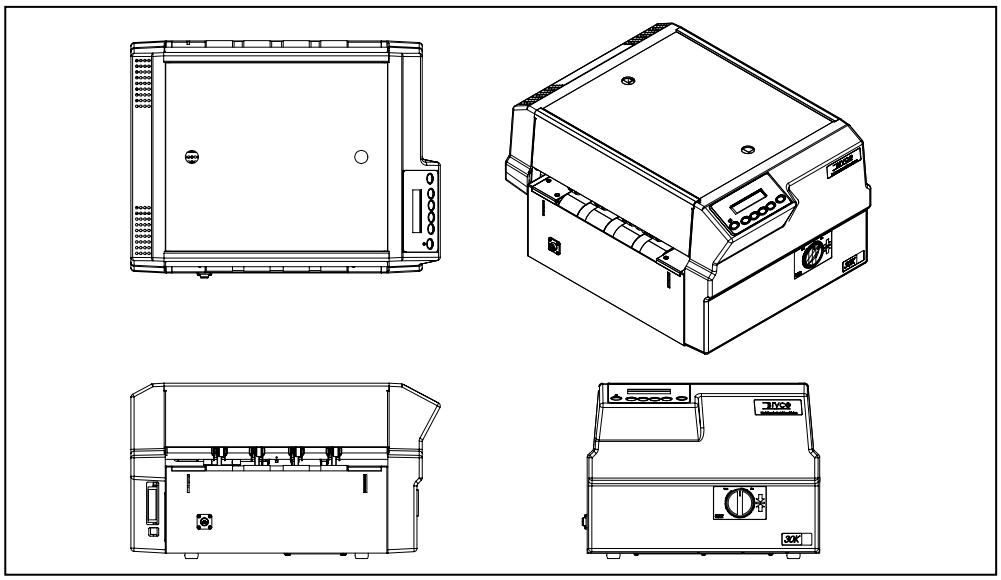
Appendices
The appendices include a quick reference table for the 30K menus, a listing of the PCL commands the printer recognizes, a hex chart to help work through a HEX dump, and references of setting up the most popular software to work with the printer. The final section has a list of supplies available for your printer.

Configurations

The printer is available in two configurations, as described in the following examples.

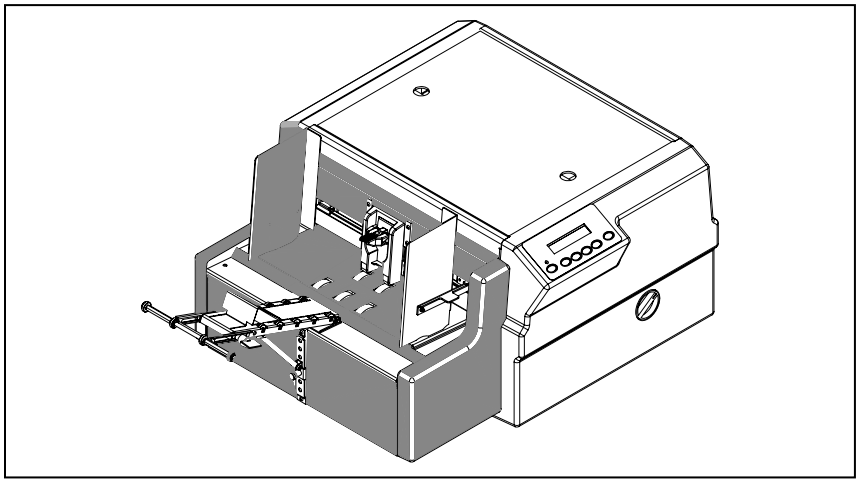
- **Bryce 30K.**

The Printer comes with two banks of black Print Cartridges for printing and 16 MB of RAM.

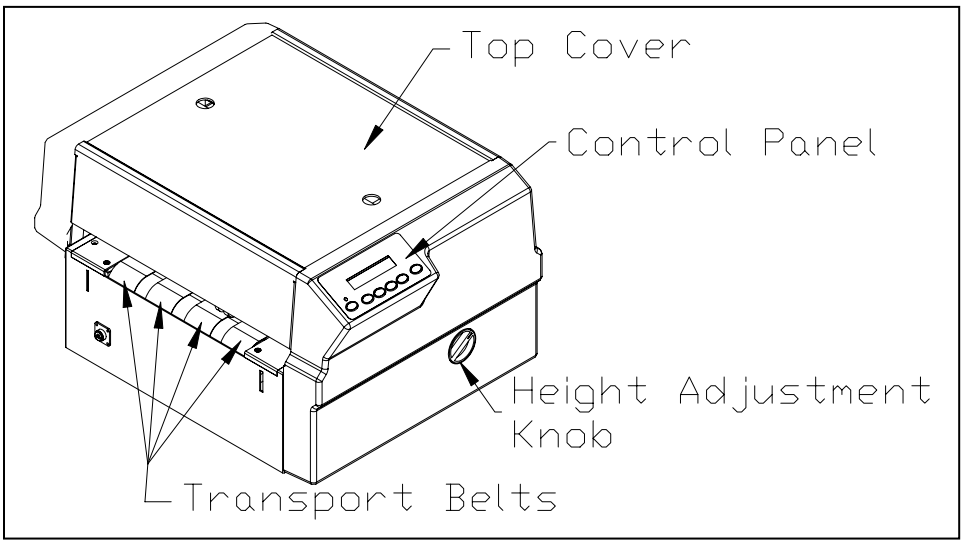


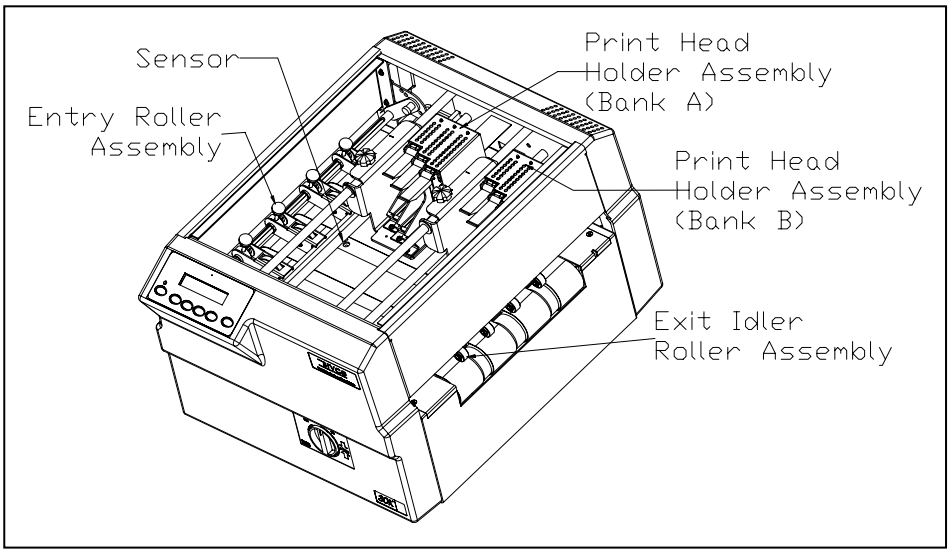
- **Bryce 30K with Feeder.**

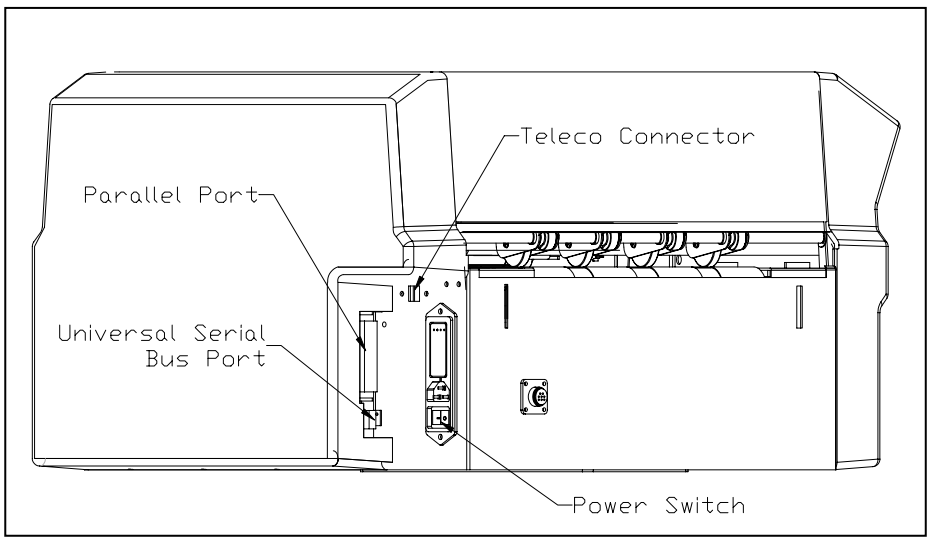
The Printer comes with a automatic Feeder Assembly that has a 7 1/2 ” stack capacity, and a standard tray and tray extension.



Printer Parts & Locations




Sensor
Entry Roller Assembly
Print Head Holder Assembly (Bank A)
Print Head Holder Assembly (Bank B)
Exit Idler Roller Assembly



Choosing a Good Location for the Printer

The following environmental considerations must be kept in mind when selecting a location for the Address Printer. Doing otherwise may affect the operation and performance of the Address Printer.

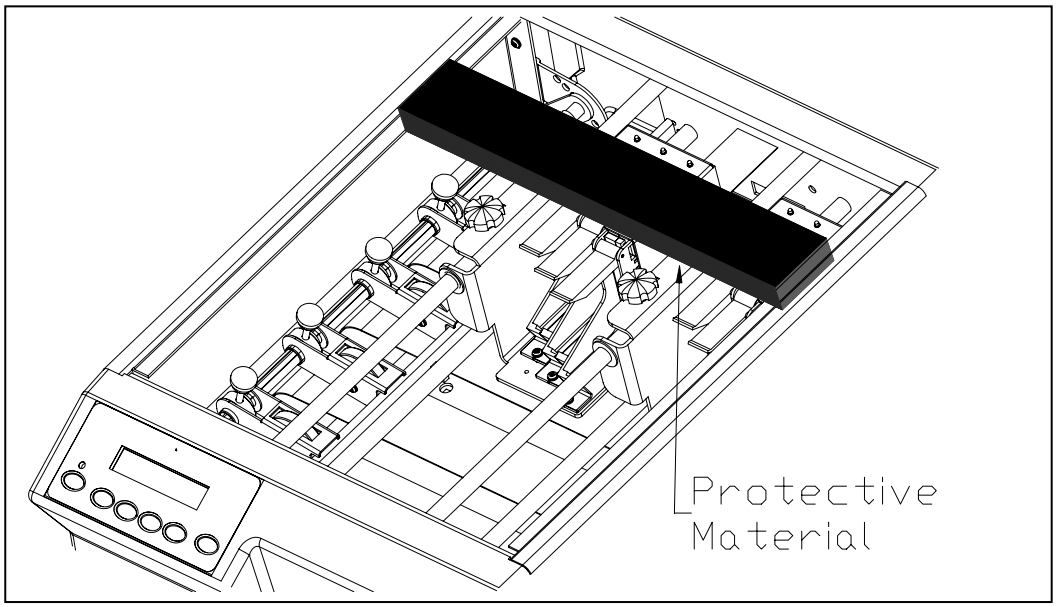
1. Place the printer close enough to the computer for the parallel cable to reach.
2. Place the printer on a flat, stable surface.
3. Use a grounded, dedicated outlet for the printer only. **Note**: Do not use an adapter plug.
4. Avoid locations near direct sunlight, excessive heat, high humidity, moisture, or dust.
5. Keep the entire system away from large motors or other appliances that might disturb the power supply or create potential interference.

Note: AB switches are not recommended for operation with this printer.

Removing Protective Materials

The printer is protected during shipping with corrugated cardboard around the Head Print Carriages.

1. Remove the Top Cover to gain access to the inside of the printer.
2. Remove the styro-foam protective insert.



Connecting the Printer

Connect the Address Printer to the parallel port of the computer. The Parallel port is located on the rear of the printer near the power switch.
To connect printer to the computer do the following steps.

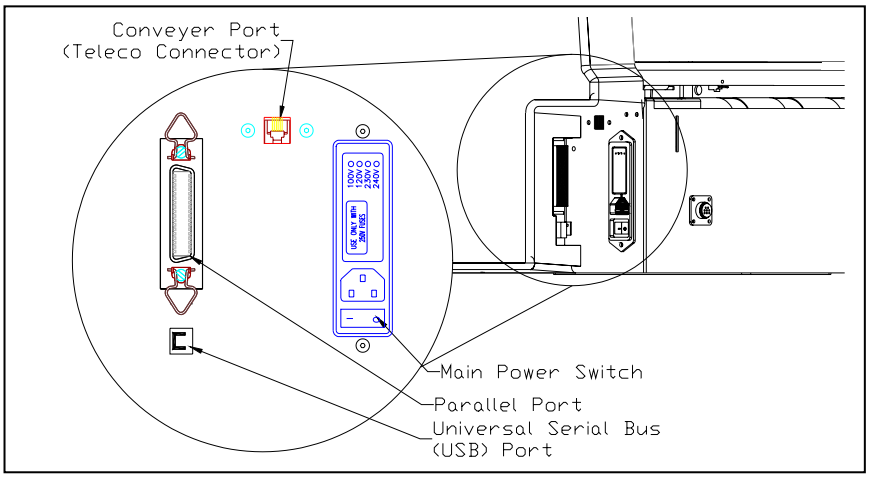
1. Align the male end of the parallel cable or female end of the serial cable connector to the port on the printer. Push the cable connector completely in.

2. Secure the cable in place. Use the two wire clips located on each side of the Parallel connector to snap into the tabs on the connector.

3. Align the other end of the cable to the connector on the computer and push into the port.

4. Secure the cable in place. Use the thumb screws on the connector to screw into the hex jack screws on the computer.

Note: AB switches are not recommended for operation with this printer.



Connecting the Power Cord

The power cord receptacle is located on the Electrical Bracket Assembly along with the ON/OFF (I/O) power switch. Connect the power cord to a grounded outlet. Avoid using outlets that are controlled by wall switches and are shared with other equipment.

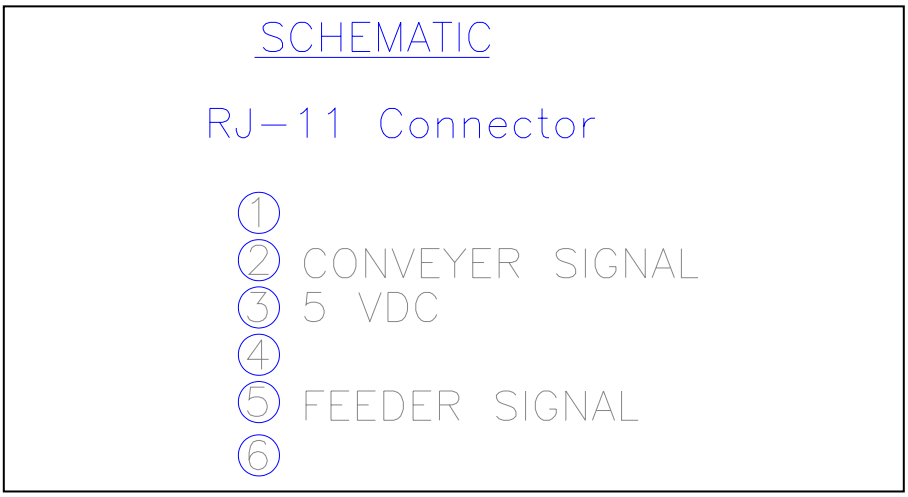
1. Make certain the ON/OFF (I/O) power switch is OFF (O). Push the female end of the power cord into the power receptacle.

2. Plug the other end into a grounded power outlet.

Connecting to the Conveyer Port: Teleco Connector

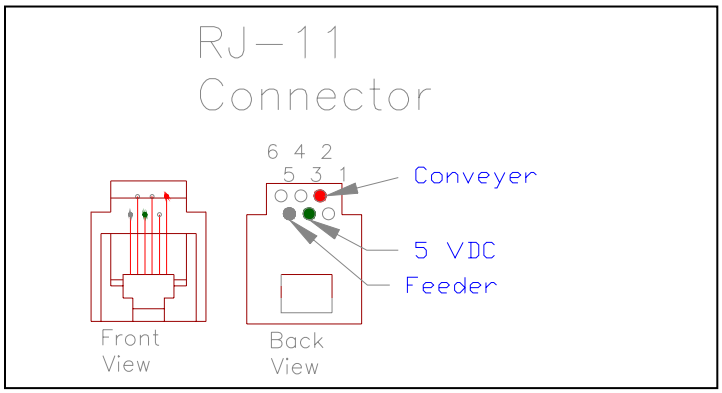
The Conveyer Port can maximize the operation of a conveyer when used with the printer. Settings used for configuring the port for a conveyer are found in the Main Menu.

The port is designed to connect to the Bryce Pulse Box (optional), then the box to the conveyer. With the Bryce Pulse Box connected the conveyer will only operate while the printer is printing addresses. The printer can control the singling of the media onto the conveyer by fine tuning the conveyer speed adjustment in the Main Menu of the printer. These options will allow the maximum number of pieces of media to be fed onto the conveyor and the longest drying time before the conveyer stacks the media.



Modifications to the amount of time the conveyer continues to run after printing a record is done through the CONVEYER TIME option in the MAIN MENU. See Section Conveyer Time for more information.

The following Schematic and Diagram of the Teleco Connector port show where the microprocessor signals to control the conveyer is found. Use the following Schematic to get the conveyer signal.



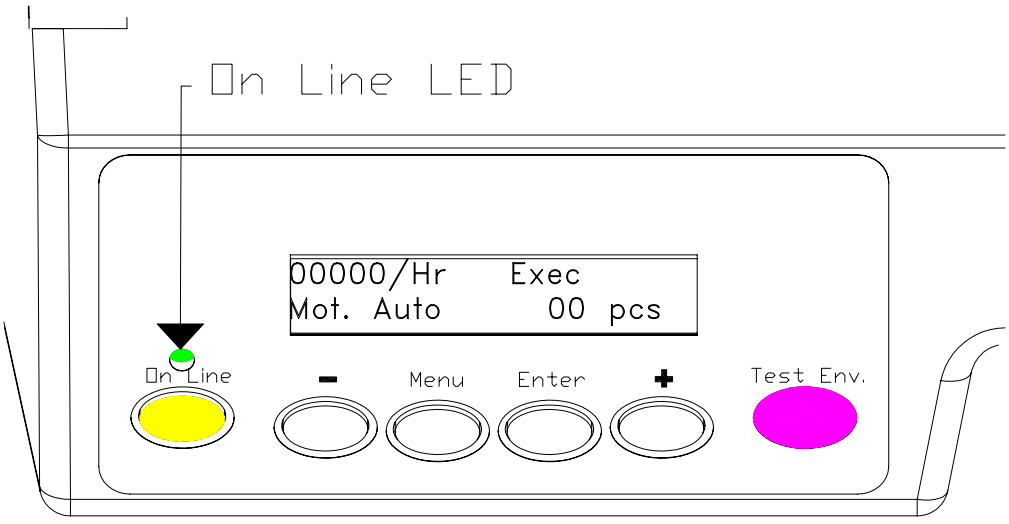
Power On

The power cord is plugged in, the printer is connected to the computer. Now you can turn the power on.

- Press on the printers' ON/OFF (I/O) power switch. The switch is located on the side of the printer next to the line cord receptacle. Press on the symbol "I" (ON) position. The printer LCD menu will display the initializing phrase PRINTER STARTING 1 then PRINTER STARTING 2 and printer will automatically go ON LINE.

The Addressing Printer uses up to six black Print Cartridges for printing. To install the cartridge, do the following:

- Verify the LED above the ON LINE button is lit. The LED is either unlit for OFF LINE or lit for ON LINE.



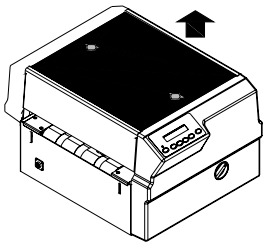
CAUTION

The ink in the print cartridge may be harmful if swallowed. Keep new and used cartridges out of reach of children. Discard empty print cartridges in the proper manner.

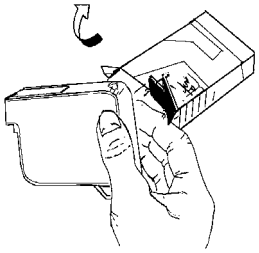
Installing a Print Cartridge

Note: The 30K was designed to use a HP 51645 style print cartridge or HP 51645A Ink Reservoir System.

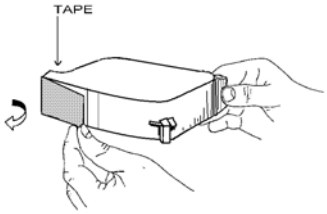
1. Remove the top cover.



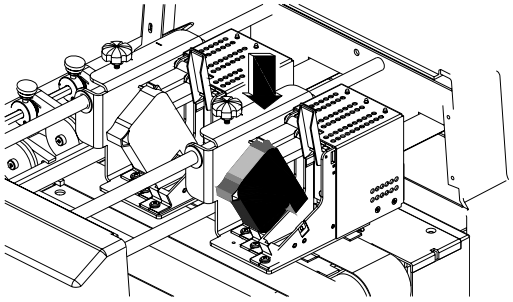
2. Remove the Cartridge from the shipping container by peeling top cover off. Be careful not to touch the copper ribbon.



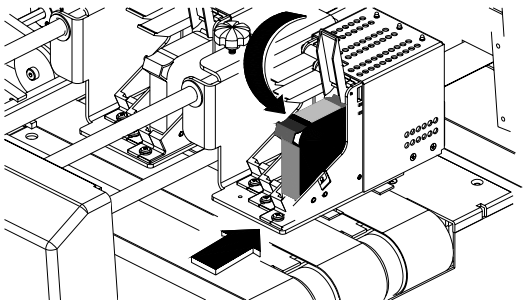
3. Gently remove both pieces of tape covering the ink nozzles on the print cartridge. Be careful not to touch the copper nozzles.



4. Raise the latch all the way up on the Head Print Assembly. Hold cartridge from the notched handle on top of the cartridge. Gently insert cartridge down at approximately a 45 degree angle into the cradle.

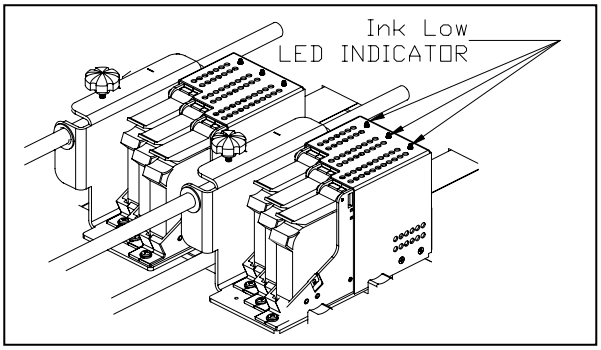


5. Push down on the ink cartridge until it is seated on the bottom of the Head Print Assembly. Push and rock the ink cartridge forward to stand ink cartridge up. Press down blue latch to lock ink cartridge in place.

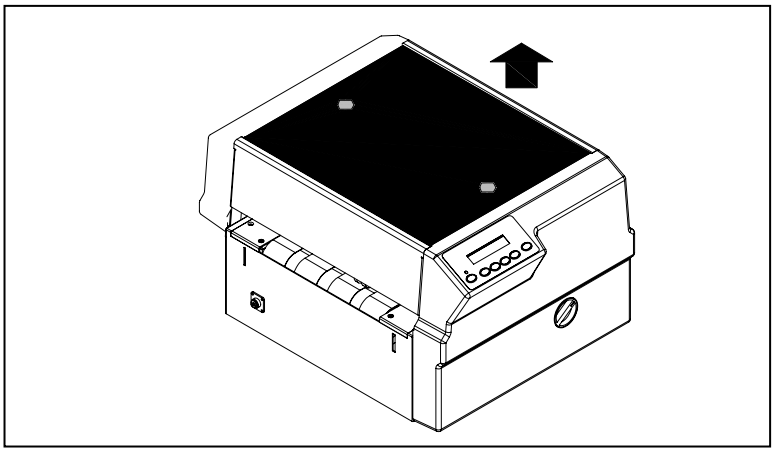


When the Ink Low LED indicator is blinking the Print Cartridges are nearly empty and have to be changed soon. Use the following steps to remove used or damaged Print Cartridges.

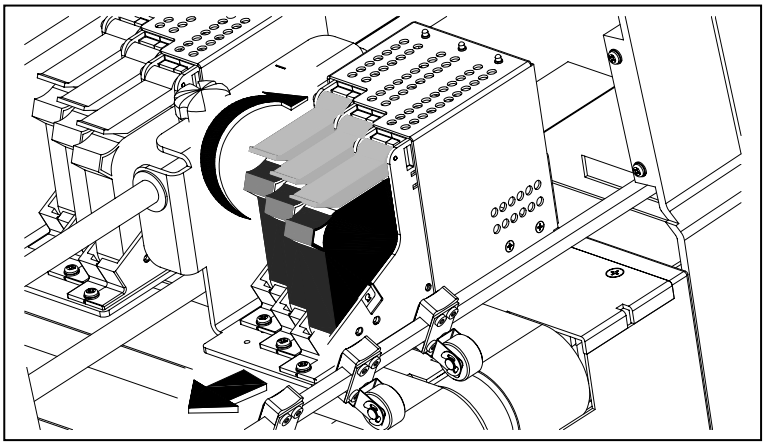
Removing the Print Cartridge



1. Remove the Top Cover.



2. Grasp the latch on top. Lift up on the latch. The cartridge will “pop” loose.



2. Grasp the handle on the ink cartridge and lift the print cartridge out of the cradle.

Note: Reset the Ink Count in the Main Menu after replacing a Ink Cartridge.

Preparing the Media

Make certain all the necessary components of the printer are installed:

- Is the printer plugged into a power outlet?
- Does the printer have at least three black print cartridges installed in one of the Banks?
- Is the printer connected to the computer?

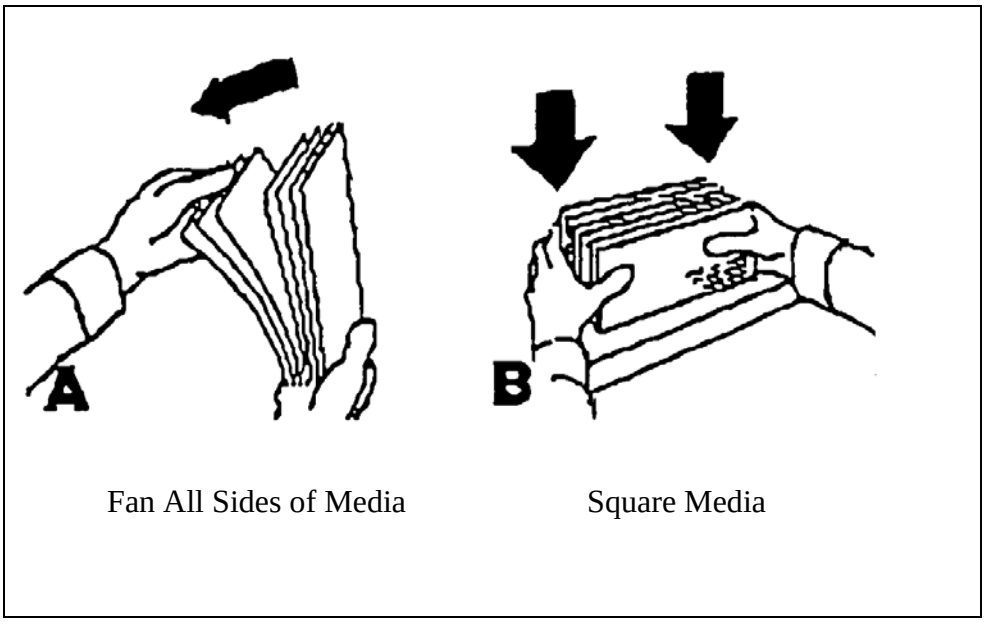
Now that the printer is installed the setup or adjustments to the printer need to be done for it to work with the media. To avoid problems of misfeeding and jams the media must also be made ready for the printer.

Use the following steps to make the media ready for printing:

1. Take a manageable pile of media and while holding them (as shown below in reference A), "fan" all sides of the media to make sure that each piece of media is free from one another.

2. Square the pile against the tabletop, assuring a square pile on all sides. (Reference B) This will also allow media to settle toward the bottom of a stuffed envelope and will increase consistency in the print and increase the feeding capabilities of the feeder.

Note: Maximum thickness is 0.5”(1.27 cm).



Fan All Sides of Media Square Media

Media Types

The printer is designed to print on a variety of media with various finishes and coatings. The sharpness of the print quality will vary with different media types. Depending on how absorbent the media is, as well as, other qualities, the best results can be achieved using white wove bonded stock. The printing quality will be less sharp on tyvek, recycled and glossy media.

The types of media the printer is able to use is:

- Envelopes: should be stacked to feed with the left or right edge first.
- Booklets: should be stacked to feed with the sealed edge leading or stacked with the sealed edge placed to feed first.
- Catalogs: should be stacked to feed with the sealed edge leading or stacked with the sealed edge placed to feed first.
- Postcards: must be 3.5” (88.9 mm) x 5” (127 mm) or larger.
- Self-Mailers: may be folded in half or “C” or “Z”. The media must be tabbed.
- Paper: may consist of 16 to 80lb of uncoated to coated stock. The maximum width and height is specified in Appendix G.

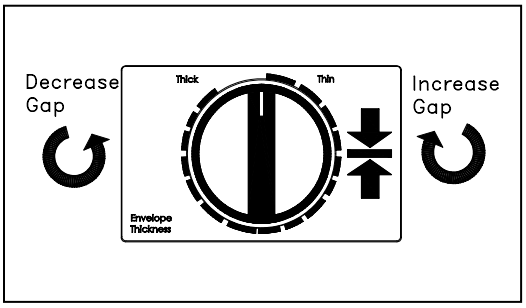
All folded material and catalogs must be tabbed as per postal regulations.

The paper types that can be used are:

- White wove
- Bond Paper
- Recycled Paper
- Coated Paper
- Card Stock
- Brown Kraft
- Manila

Finding the Right Height Adjustment for Media Thickness

Different sizes and types of media call for unique settings of the Print Head Assemblies. To accommodate different sizes of media the Print Head Assemblies have to be raised or lowered until they touch the top of the media. Enough pressure has to be applied by the metal wipers underneath the Print Head Assemblies to keep the media from moving around beneath the Print Cartridges while printing. Use the following steps as a general guideline for most types of media.



1. Turn the Envelope Thickness Knob to raise the Print Head Assemblies.

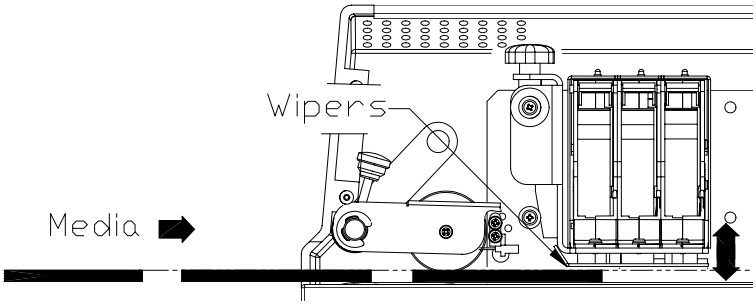
2. Insert a piece of the media beneath the Print Head Assemblies.

3. Lower the Print Head Assemblies down to just touch the media and create a little resistance when it is removed.

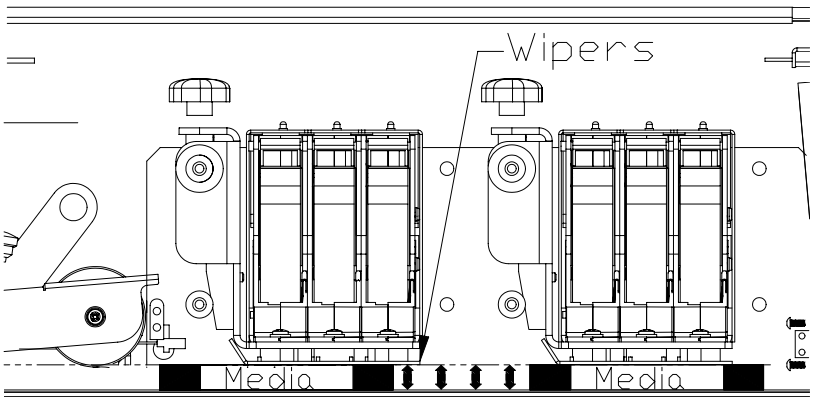
4. Press the [**Test Env**.] button to print a test message and check the quality of the print.

Note: The Print Head Assemblies are to low when the print looks smeared or clumped together.

Lower towards media.



Set to top edge of Media



Adjusting the Entry Roller Assembly

The Entry Rollers keep the media pressed onto the Transport Belts until it again gets trapped beneath the wipers of the Print Head Assemblies.

1. Remove the Top Cover from the printer to gain access to the inside.

2. Insert a piece of the media into the printer. Push it beneath the Entry Rollers in the same location as the feeder will send it.

3. Pull the Spring Plunger out to unlock the Index Wheel.

4. Raise the Index Wheel up to the top hole to lessen the tension on the Entry Roller Assemblies and release the plunger to secure the wheel in place.

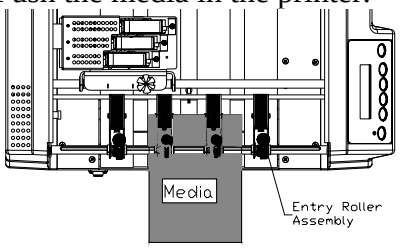
5. Turn the Thumb Screw to release the Entry Roller Assembly to reposition it on the shaft.

6. Lift and slide the Entry Roller Assemblies onto the piece of media. Move any Entry Rollers near the sides of the media further in on the media or push them out of the way. **Note**: Rollers running on the edges of the media may catch the edge and twist the media. Also, locate the rollers on top of a Transport Belt.

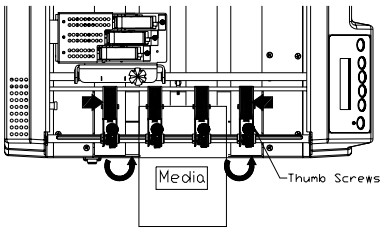
7. Turn the Thumb Screw to secure Entry Roller Assembly in place. **Note**: Check that the Thumb Screw goes back into the slot in the shaft.

8. Pull the Spring Plunger out and lower the Index Wheel to put the tension back on the Entry Rollers. **Note**: Adjust the spring tension on the Entry Rollers by moving the Index Wheel up or down to accommodate different types of media.

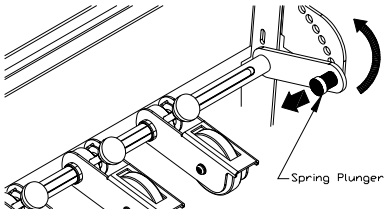
Push the media in the printer.



Move the Entry Rollers onto the media.

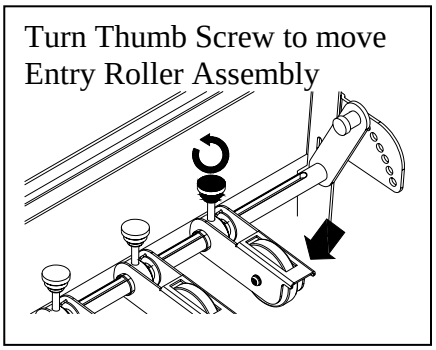


Pull Spring Plunger out to unlock.



9. Remove the piece of media and perform a test run to check the position of the Entry Rollers on the media during operation of the printer.

10. Replace the Top Cover to the printer.



Adjusting the Exit Idler Assemblies

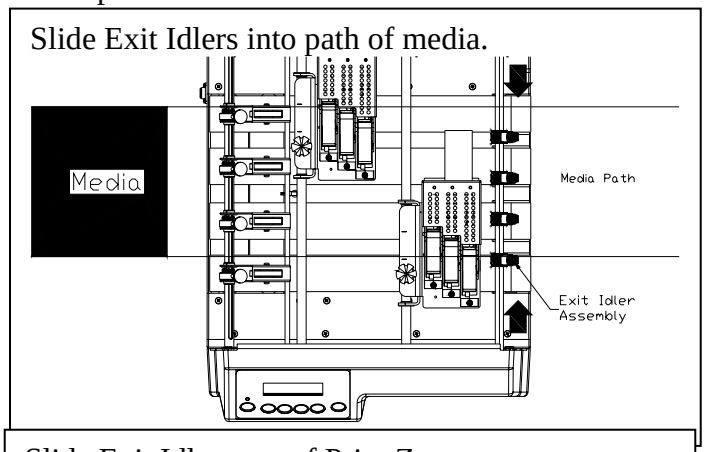
The Exit Idler Assemblies keep the media from twisting or moving around while it is still in the printer. For the Exit Idler Assemblies to be effective they must be moved into the path of the media and yet be in a clear zone (non printing area of the media). If any of the rollers come into contact with the printing they will act as a brush with paint and smear the print.

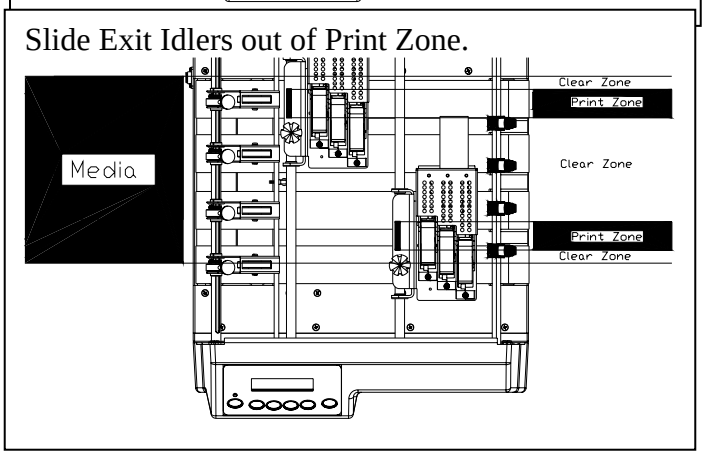
1. Remove the Top Cover to gain access to the inside of the printer.

2. Slide the Exit Idler Assemblies to mirror the arrangement of the Entry Roller Assemblies. If the Entry Rollers are properly set the Exit Idler Assemblies are also in the path where the media will travel trough the printer.

3. Locate the labels that indicate the Print Zone on each of the Print Head Assemblies. Slide those Exit Idler Assemblies that are in the path where the ink is being sprayed to a clear zone on the piece. **Note**: Run the printer to test where the media will travel and to check the location of print on the piece.

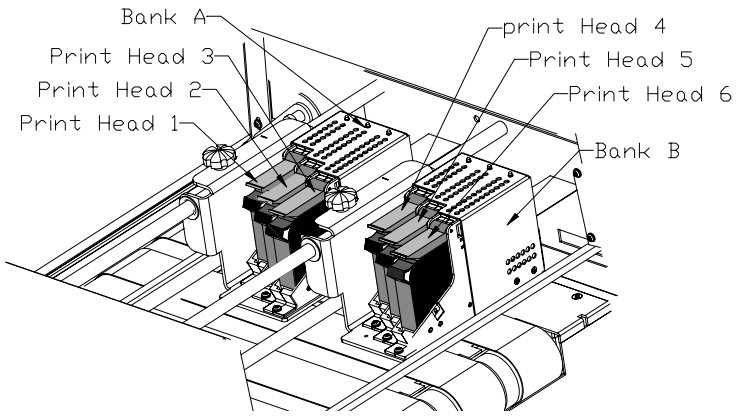
4. Replace the Top Cover to the printer.



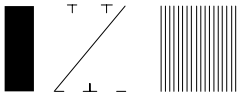


Synchronizing new Print Cartridges in the Print Head Assembly

Each bank of three Print Cartridges has to be synchronized to print graphics, scaleable fonts or to justify the left edge of print. If the Print Cartridges are not synchronized anything that requires two or three Print Cartridges to line up a left edge or to print next to each other may print to the left of one another or on top of each other. When installing a new print cartridge or cartridges into a 3 Print Head Assembly it may be necessary to realign it with the other print cartridges. Synchronizing the print cartridges in the Print Head Assemblies is accomplished using the Service Menu option Adjust Print.



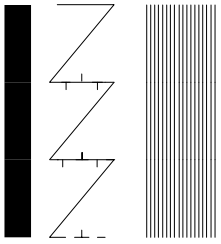
The following procedures will refer to the left 3 Print Head Assembly as Bank A, and the right 3 Print Head Assembly as Bank B. Synchronize each Bank of Print Cartridges by aligning the Test Pattern that is printed by each of the Print Cartridges. Each Print Cartridge will print a Test Pattern like the one below.



Head 2 Bank A

Each carriage uses the leftmost Print Cartridge of the three to synchronize the other two Print Cartridges. Counting from left to right, the leftmost Print Cartridge in Bank A is referred to as Head 1 and the leftmost Print Cartridge for Bank B is referred to as Head 4.

The Test Pattern for a bank of Print Cartridges should look like the following example when all three print cartridges are synchronized.



Head 1 Bank A

Head 2 Bank A

Head 3 Bank A

Note: Have several pieces of media to use when synchronizing the Print Cartridges.

Vertically Synchronizing a Bank of Print Cartridges

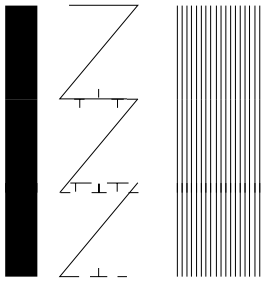
When lines of print start to run on top of each other the Print Cartridges have to be synchronized vertically. Perform a Vertical adjustment whenever the center of the Test Pattern isn't a solid crooked line. Work down from Head 1 on Bank A or Head 4 on Bank B.

The following steps are an example of how to synchronize Print Cartridges for Bank A. The same steps are taken for vertically synchronizing Bank B.

Example:
In the example below the crooked line in the center indicates Print Cartridge #3 has to have the printer perform a vertical print adjustment.

Use the following steps to adjust Print Cartridge #3:

- Accessing the menu can only be accomplished in the OFF LINE mode.
- When in ON LINE mode press the **[On Line]** button. Once OFF LINE the service menus are accessible. Press and hold down the **[Menu]** and **[-] (Minus)** button simultaneously until SERVICE MENU appears on the LCD display (in about two seconds).
- Press the **[+]** plus or **[-]** minus buttons to scroll through the Service Menu options until the 1. ADJUST PRINT option is displayed on the LCD panel.
- Press the **[Enter]** button to select this option.
- Now print out a Test Pattern by pressing the **[Test Env]** button. The printer will print a Test Pattern like the following example:



Head 1 Bank A

Head 2 Bank A

Head 3 Bank A

The example shows Print Cartridge #3 is to high.

- Press the **[+]** plus or **[-]** minus buttons to scroll through the Adjust Print menu options until the HEAD 3 UP DOWN option is displayed on the LCD panel.

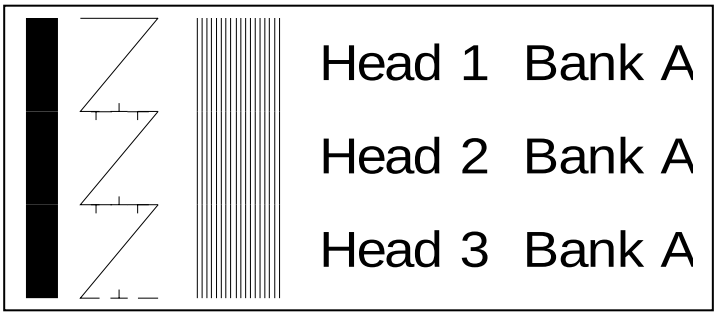
- Press the **[Enter]** button to select this option.

- Press the **[+]** plus (UP) button to increment the horizontal line value on the LCD display.

- Press the**[-]** minus (DOWN) button to decrease the horizontal line value on the LCD display.

- Press the **[Enter]** button to select the desired value. An Asterisk (*) will appear in front of the new selection.

- Press the **[Test Env]** button to print another Test Pattern. This time the Test Pattern is printed using the entered selection. The pattern printed should look like the following example:



When the correct numeral is selected the center test pattern will be one long crooked line.

- Press the **[Menu]** button several times to back out of the Service Menu.

- Press the **[On Line]** button; now the printer is ready for use.

Horizontally Synchronizing a Bank of Print Cartridges

When a line of print is split apart or the left edge of a block of lines don't line up with the left edge of the other lines the Print Cartridges have to be synchronized horizontally. Perform a Horizontal adjustment whenever the large solid line and the set of 18 thin vertical lines do not form long vertical lines for the whole bank of Print Cartridges.

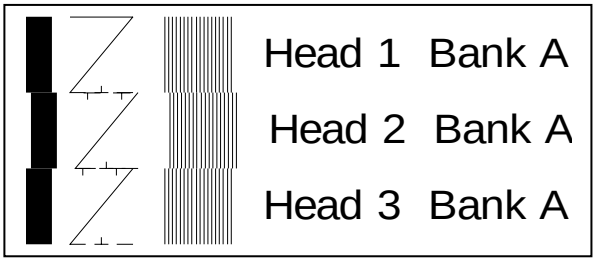
The following steps are an example of how to synchronize Print Cartridges for Bank A. The same steps are taken for horizontally synchronizing Bank B and any extra banks of Print Cartridges.

Example:
In the example below the large vertical line on the left and 18 thin vertical lines indicate Print Cartridge #2 has to have the printer perform a horizontal Print Adjustment.

Use the following steps to adjust Print Cartridge #2:

- Access the ADJUST PRINT menu. See example in Vertically Synchronizing a Bank of Print Cartridges.

- Print out a Test Pattern by pressing the **[Test Env]** button. The printer will print a test pattern like the following example:



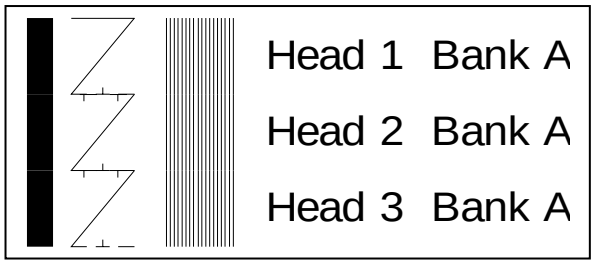
The example shows Print Cartridge #2 is to far to the right.

- Scroll to the menu option HEAD 2 SIDE TO SIDE and select the option.

- Press the **[+]** plus (LEFT) button to increment the horizontal line value on the LCD display.

- Press the **[Enter]** button to select the desired value. An Asterisk (*) will appear in front of the new selection.

- Press the **[Test Env]** button to print another test pattern. This time the test pattern is printed using the entered selection. The pattern printed should look like the example to the right.

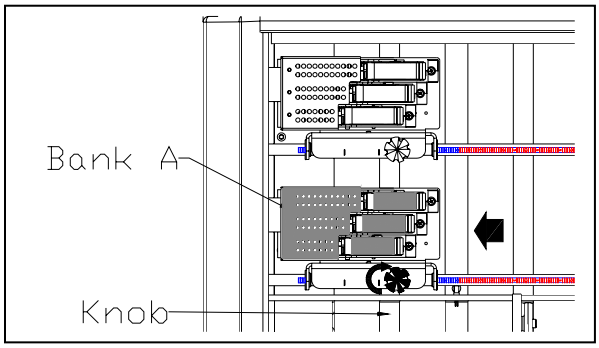


When the correct numeral is selected the large line and the set of 18 vertical lines form long vertical lines down the entire Bank A of Print Heads.

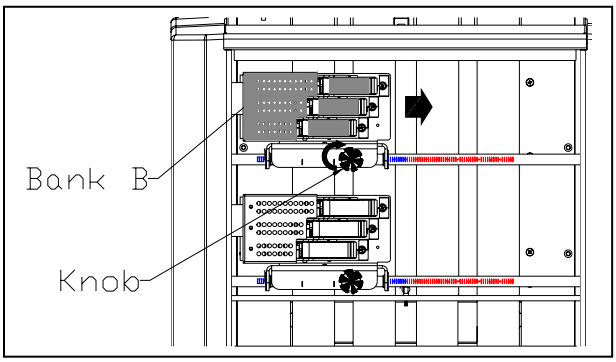
Use the two Banks to print a return address and indicia on the top of a piece with the addressee's on the bottom with a USPS barcode printed on the bottom. Or combine to two banks together for single large block graphic with the address added in.

Adjusting the Banks Apart

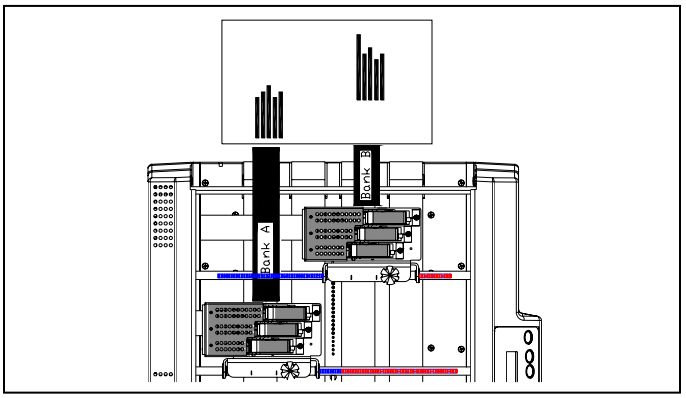
Example: Use the following steps to adjust the 3 Print Head Assemblies apart.



1. Remove the Cover from the printer.
2. Loosen the knob on top of the bracket that secures Bank A.



3. Move Bank A to the top of the piece for return address and indicia.
4. Loosen the knob on top of the bracket that secures Bank B.
5. Position the Bank near the middle of the piece.
6. Move the Exit Rollers out of the area where Bank A and Bank B are printing on the media. If the Exit Rollers contact any printed information on the media they will act as a brush with paint and smear the print. Use the scale on the shafts to help position the Banks.

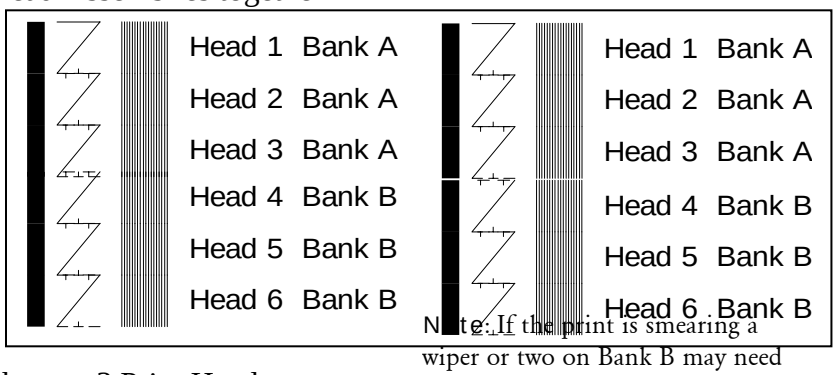


7. Print out the Adjust Print test message. The test shows the area where the banks will print. Check if any of the exit rollers run over the top of the print, move the rollers over to a clear zone (non printing area of the media) before continuing.

Adjusting the Banks together

The two Banks of print cartridges can be combined and used as one large block of print heads. This is best done for large fonts and big graphics or two dimensional bar-coding. To synchronize two or more 3 Print Head Assemblies together requires mechanically adjusting the banks together and using the menus to horizontally synchronize the banks together.

The graphic to the right shows that Bank A and Bank B have to be moved or adjusted to combine both carriages.

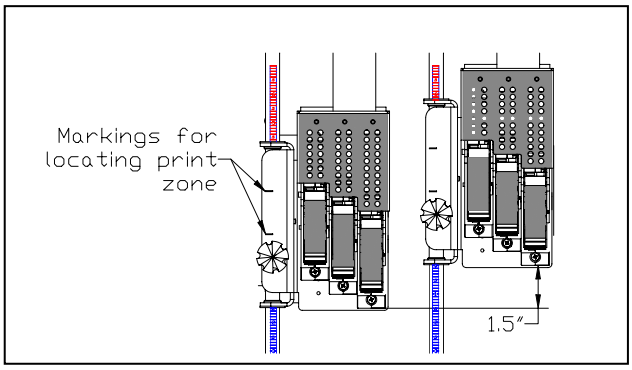

Head 1 Bank A
Head 2 Bank A
Head 3 Bank A
Head 4 Bank B
Head 5 Bank B
Head 6 Bank B
Head 1 Bank A
Head 2 Bank A
Head 3 Bank A
Head 4 Bank B
Head 5 Bank B
Head 6 Bank B

Note: If the print is smearing a wiper or two on Bank B may need to be removed or relocated to a open area near the back of the Print Head Assembly. See Section Moving the Wipers.

Use the following steps to adjust the two 3 Print Head Assemblies together.

1. Move the 3 Print Head Assembly to the area that Bank A will be printing on the piece.

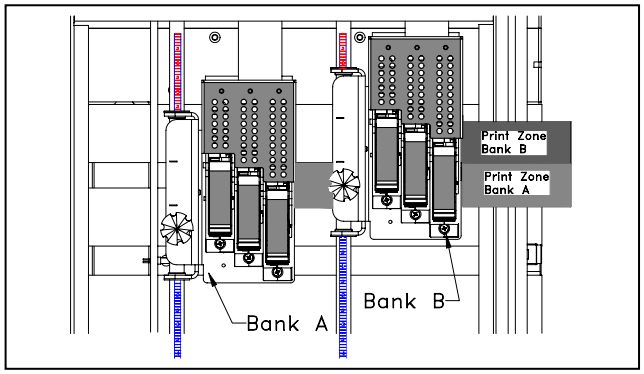
2. Secure Bank A in place. In this example the other Bank of print cartridges are going to get set relative to Bank A.



3. Move the front of the right Print Head Assembly (Bank B) 1.5 inches (3.81 cm) forward from Bank A. **Note**: The markings on the brackets are there to help locate where the bank of print heads is going to print. The scale on the shafts is there to help align the two Banks together.

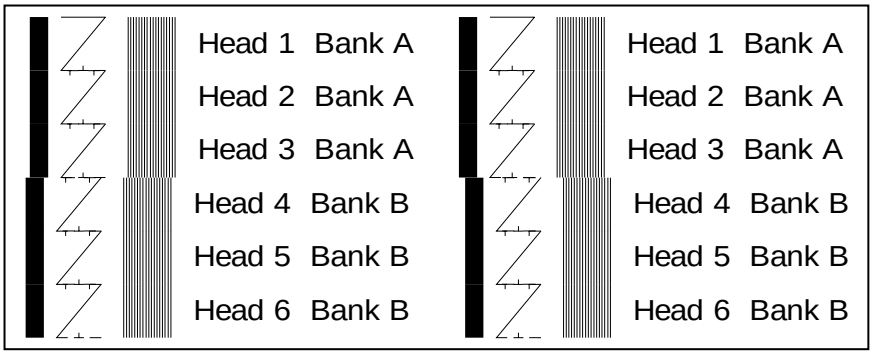
4. Print out a Adjust Print test message.

5. Make adjustments by moving Bank B in or out. Look for the Adjust Print test pattern to make a solid pattern across both banks.



Synchronizing 3 Print Head Assemblies

The two 3 Print Head Assemblies need to be synchronized using the Adjust Print menu when the Test Pattern looks like one of the two examples below.


Head 1 Bank A
Head 2 Bank A
Head 3 Bank A
Head 4 Bank B
Head 5 Bank B
Head 6 Bank B
Head 1 Bank A
Head 2 Bank A
Head 3 Bank A
Head 4 Bank B
Head 5 Bank B
Head 6 Bank B

The Adjust Print menu has to be used when synchronizing the two banks together. For more information about the Adjust Print menu see the section in the Service Menu.

- Press the **[+]** plus or **[-]** minus buttons to scroll through the Service Menu options until the 1. ADJUST PRINT option is displayed on the LCD panel.

- Press the **[Enter]** button to select this option.

- Press the **[+]** plus or **[-]** minus buttons to scroll through the Adjust Print menu options until the BANK A TO BANK B option is displayed on the LCD panel.

- Press the **[Enter]** button to select this option.

- Now print out a Test Pattern by pressing the **[Test Env]** button. The printer will print a Test Pattern like the preceding example.

The Test Pattern consists of three rows of different patterns, the first wide line and the eighteen vertical lines are used for synchronizing Bank A and Bank B.

When the two patterns do not match to form long vertical lines, then perform the following steps.

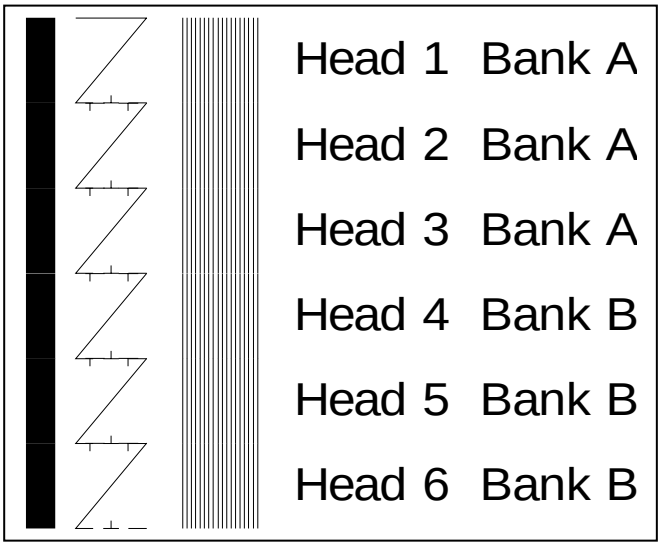
- Press the **[+]** plus (MORE) button to increment the Move Bank B value on the LCD display.

- Press the **[-]** minus (LESS) button to decrease the Move Bank B value on the LCD display.

- Press the **[Enter]** button to select the desired value. An Asterisk (*) will appear in front of the new selection.

- Now print out a Test Pattern by pressing the **[Test Env]** button. The printer will print another test pattern. This time the test pattern is printed using the entered selection.

The pattern printed should look like the following example:



When correct all lines should be straight.

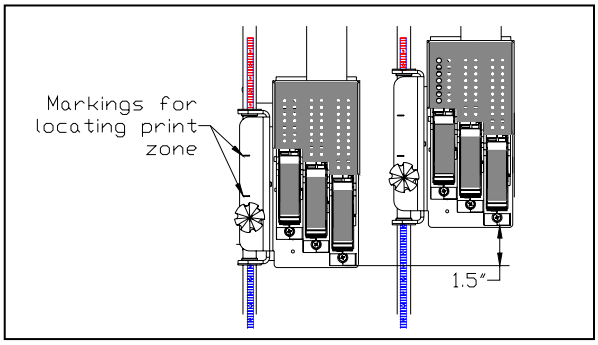
- Press the **[Menu]** button several times to back out of the Service Menu.

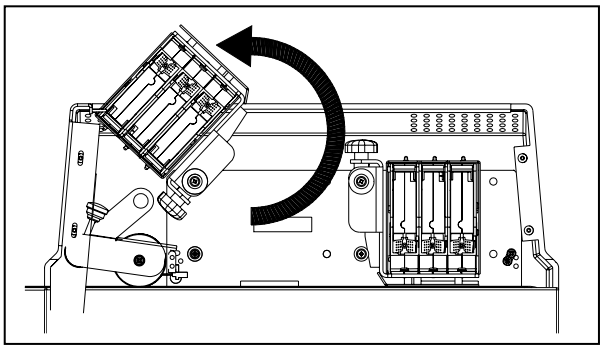
- Press the **[On Line]** button; now the printer is ready for use.

Moving the Wipers

The 3 Print Head Assemblies have several holes for relocating the two narrow Wipers. Move the wipers when synchronizing banks of print cartridges or when two or more banks of print cartridges are printing near the same area or the Print Head Assembly has to print on or near the edge of a piece of media. Move the wiper(s) when it causes a problem while the media is on the Transport Belts.

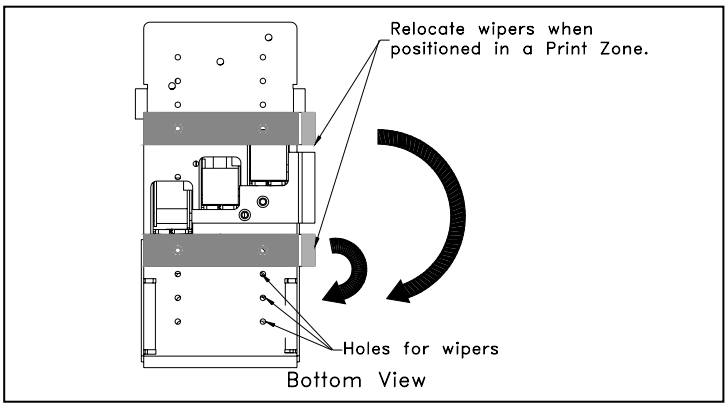
Pay special attention when using Bank A with Bank B of Print Head Assemblies. If the wipers run over an area on the media where ink was just sprayed the print will smear or smudge. The area where ink is sprayed onto the media is referred to as a Print Zone. Use the markings located on the bracket of each Print Head Assembly to judge where the Print Zone for Bank B is located. Move the Wipers to an area outside of the Print Zone to maintain the best print quality.





Perform the following steps to move the Wipers:

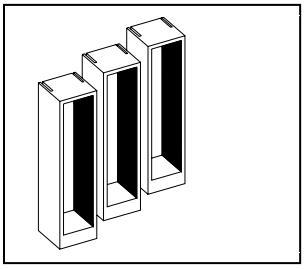
1. Remove the Cover from the printer.
2. Loosen the knob on top of the bracket that secures the Bank of Print Head Assemblies.
3. Flip the Bank of Print Head Assemblies upside down to expose the bottom of the assembly.
4. Remove the two screws securing the Wiper(s) on the Print Head Assembly (Bank A or B).
5. Relocate one or both wipers away from the Print Zone or edge of the media. Reinstall the wiper(s) using the two screws on each wiper.



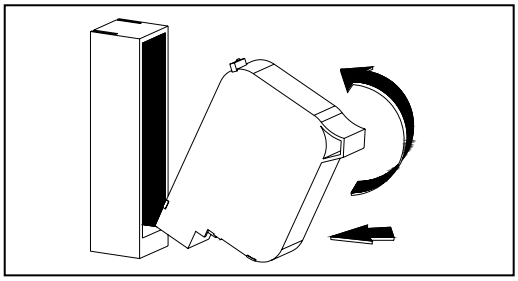
Note: Move the Wiper(s) far off to the side if one or both are running along the edge of the piece or just off the edge. This may cause skewing of the print or paper jams.

Prolonging the life of Print Cartridges

Included in the Accessories are Cartridge Capping Assemblies to enclose the nozzles of the print cartridges. Proper use of the Cartridge Capping Assemblies help in maintaining the quality of print from the print cartridges and help to prevent the ink from drying and creating severe clogging of the print cartridge nozzles.



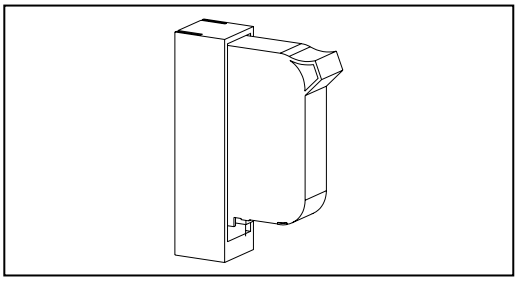
Use the Cartridge Capping Assemblies when the 30K Printer is left to idle or shut down for a more than a few minutes. To use the Cartridge Capping Assemblies the ink cartridges have to be removed from the Print Head Assemblies. **Note**: Keep the ink cartridges in order or numbered otherwise the counter for the percent ink remaining will give false information.
Employ the following steps to use the Cartridge Capping Assemblies.



1. Remove the ink cartridge from the Print Head Assembly. (See section 3-3 for information on removing the ink cartridges.)

2. Remove any excess ink on the nozzles.

3. Install the ink cartridge nozzle first into the Cartridge Capping Assembly. **Note**: Clean any ink buildup on the rubber seal to prevent it from obstructing the nozzles.



4. Press the top section completely into the Cartridge Capping Assembly.

5. Remove the ink cartridge from the Cartridge Capping Assembly in reverse order. **Suggestion**: Check the Print Head Alignment and perform a Purge of the ink cartridges before operating the printer.

Factors that Affect the Printers Performance

Affects the performance of the Printer

The 30K Printer is designed to give the best possible performance, but the speed can be affected by these factors.

1. The amount of memory available in the computer.
2. Whether the printer is running as a network printer or with a print spooler.
3. Pre-glued flaps on the media
4. Glossy or heavily waxed media.
5. Setting up margins, or sending non printable characters or blank spaces in the records.
6. Sending blank lines in each record.

Tips for Running the Job

1. Use a computer dedicated to the printer only.
2. Tab magazines or stapled sheets.
3. Eliminate blank spaces and lines in the records. Extra characters take extra time to process.
4. Records with differing numbers of lines should be followed with a page break or form feed.
5. When only one bank of print heads are required to print the job use Bank B for printing.

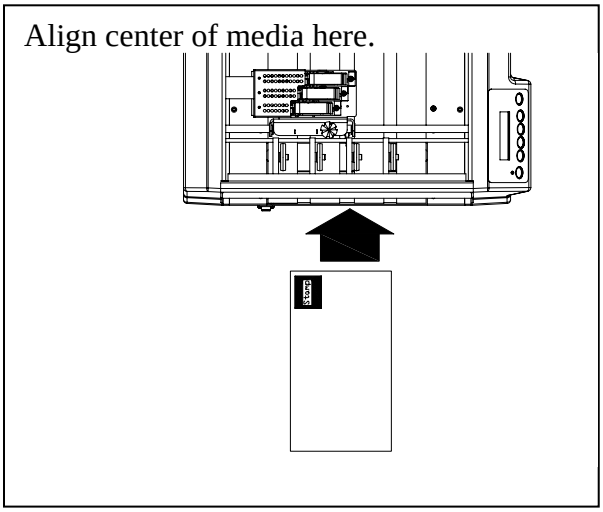
Setting up a feeder to work with the printer.

To use a feeder with the printer the setup requires two considerations:
Use the following recommendations to help in setting up the printer.

- **Media must go through the center of the Printer**

To use a feeder with the printer it is best to position the feeder so the media travels through the center of the printer. This is very important with small or thin media like post cards or envelopes. Make certain the media will travel beneath the sensor or in the path of the sensor beam.

Align center of media here.



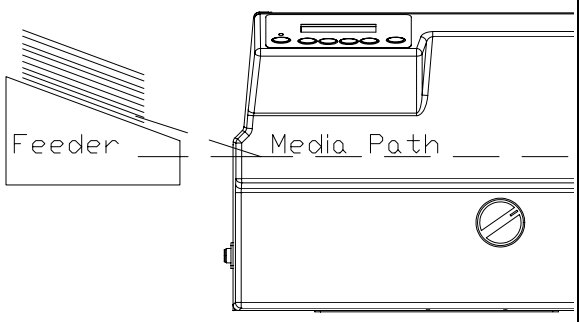
The media has to travel through the path of the sensor beam for the record to be printed. This is very important with small or thin media like post cards or envelopes. Use the illustration to the right for an example.
Mount the feeder to the center of the printer. The media must interrupt the sensor beam for the printer to know when media is being fed.

- **The Entry Roller Assemblies must take hold of the Media.**

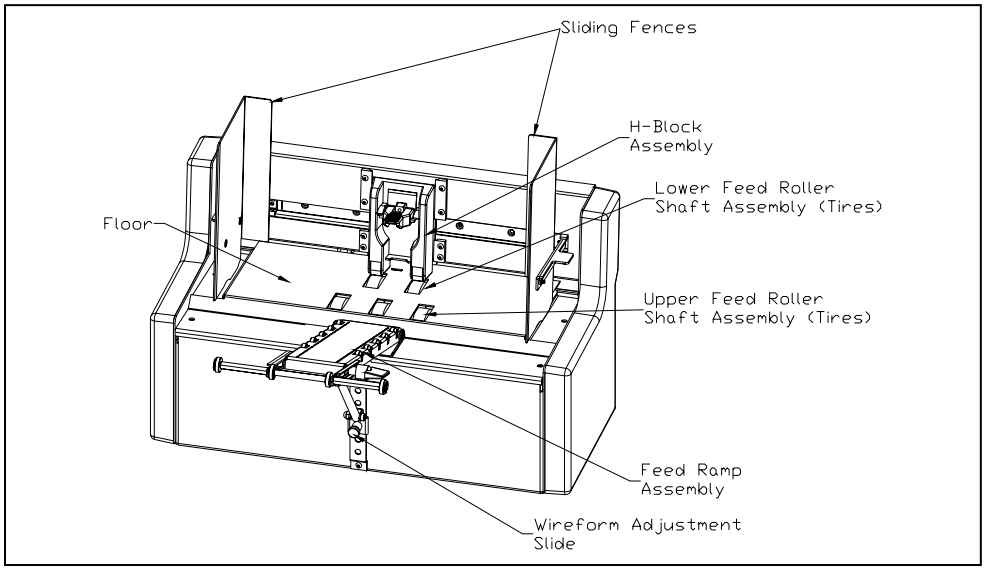
Move the feeder close enough for the printer to have the Entry Roller Assemblies grab the media and guide it beneath the Print Cartridges.

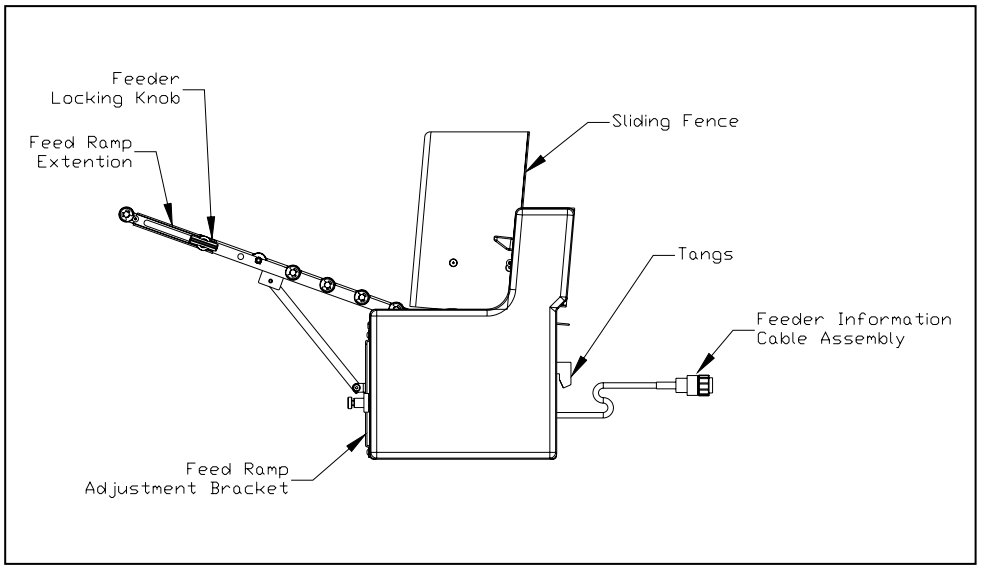
The media can be sent at a slight incline or straight into the printer.
Note: The Entry Roller Assemblies must have control of the speed and direction of the media otherwise poor print quality or feed errors may occur.

The Entry Roller Assemblies guide the media down the Media Path.



Bryce Feeder Parts & Locations





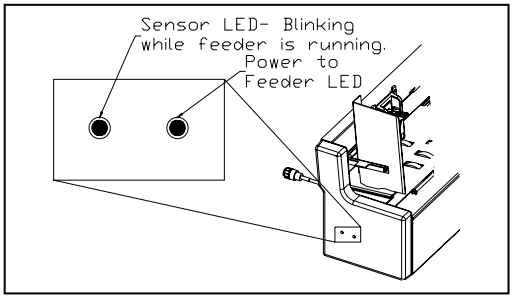
What the LED's Do

The red lights on the back of the feeder indicate when the feeder is operating correctly and when they are not lit attention to the feeder is required.

When the LED's are:

Feeder LED Steadily Lit- While the Feeder has power the LED will remain lit.

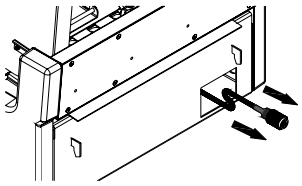
Sensor LED Blinking – When media is being fed the LED will blink as each piece passes beneath the sensor. When media is blocking the sensor beam the LED will remain off. Once the media is removed from the path of the beam the LED is lit.



Attaching the Bryce Feeder Assembly

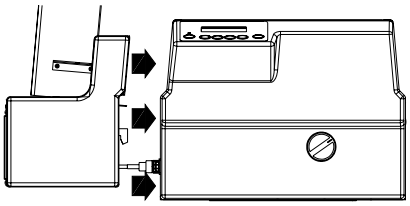
1. Pull the connector out from the Feeder.

Pull connector from slot.



2. Move the Bryce Feeder next to the left side of the Printer.

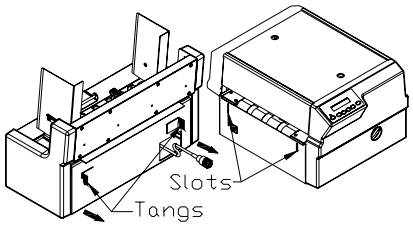
Move Feeder next to Printer.



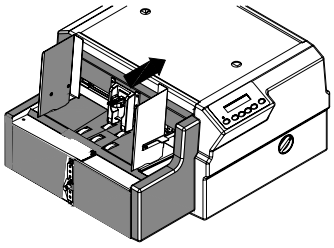
3. Plug the connector to the printer and twist to secure connection.

4. Raise the Feeder up. Stuff extra cable back into the Feeder Assembly.

Insert tangs into the slots on printer.

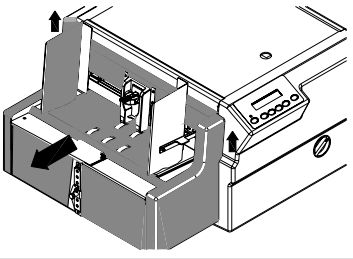


5. Hook the two tangs into the two slots on both sides of the printer.



6. To remove the Bryce Feeder, lift the feeder up to unhook from the Printer and pull the feeder away from the printer.

7. Disconnect the Feeder from the Printer.



Attaching the Feed Ramp Assembly

1. Place the Feed Ramp Assembly onto the Feed Ramp Holder. Align the holes on the sides of the Feed Ramp Assembly to the holes of the Feed Ramp Holder. (See figure 2.)

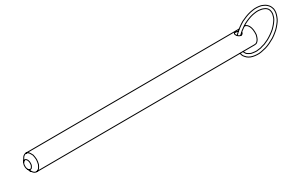


Figure 1

2. Insert Quick Release Pin (See figure 1.) completely through the all the holes and out the other side of the Feed Ramp Holder. Press it in until the Ring is flush against the side of the Holder.

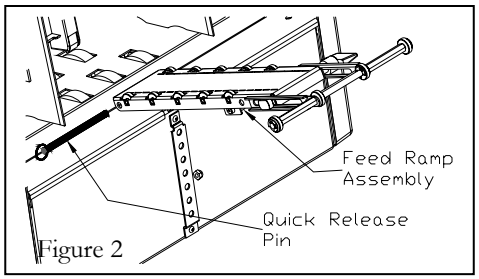


Figure 2

3. Raise the free end of the Feed Ramp Assembly up to a nearly vertical position. (See figure 3.)

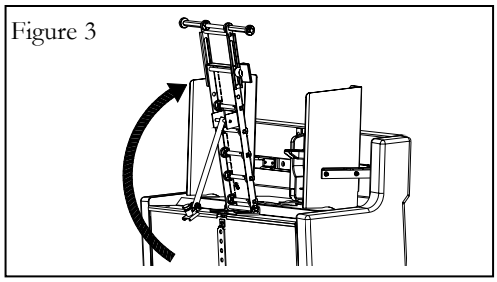


Figure 3

4. On the bottom of the Feed Ramp Strut is the Wire Form Adjustable Slide. Place the Slide with the plunger onto the top of the Feed Ramp Adjustment Bracket located on the side of the feeder. (See figure 4.)

5. Pull the plunger out and lower the slide onto the bracket. Release the plunger into one of the holes to secure the Wire Frame Assembly in place. (See figure 5.)

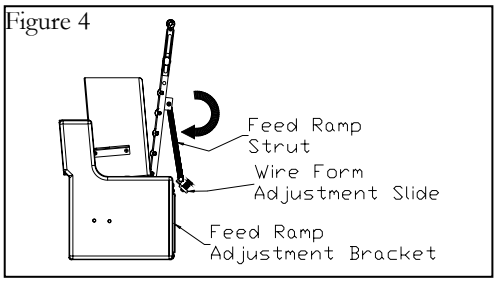


Figure 4

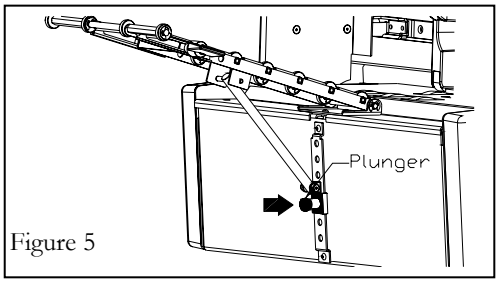


Figure 5

Setting the H-Block Assembly

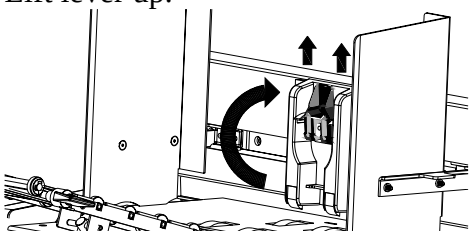
Whenever the printer will be printing on a different media type it is necessary to re-align the spacing between the H-Block and the rollers.
The next five steps will instruct the operator on how to correctly adjust the H-Block spacing for printing on a particular type of media. Readjust the thickness of the H-Block if the printer continues experiencing misfeeds or hesitation in feeding.

Open the Inner & Outer Fences away from the center of the feeder.

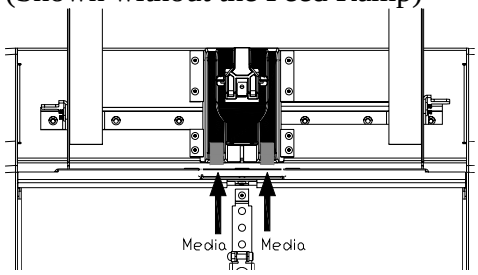
1. Raise the Lever on the "H" Block Assembly completely up to lift the block to the highest position and secure in place.
2. Manually place one piece of the media between the separator fingers (lower section of the "H" block) and the feed roller.
4. Release and lower the "H" Block. Let it fall freely onto the media. When lowering the "H" block, verify the media is between **all separator fingers** and the Feed Roller.
5. Press the Lever down to secure it in place.
6. The input bin area can now be filled with the desired media for printing. The media stack should be "shingled" when loaded into the input bin with flap facing downward. Start with just a few envelopes to start the stack and get the proper contour then add more pieces.

- **Post cards** - set a smaller gap between the separators and feed roller, by using standard copy paper (.003" [0.076 mm] thickness).
- **Stuffed Media** - set a larger gap between the separator blocks and the feed roller, by adding two or three, number ten (# 10) envelopes, on top of the media before setting the separators

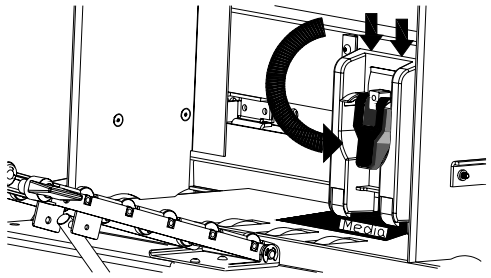
Lift lever up.



Place Media under H-Block
(Shown without the Feed Ramp)



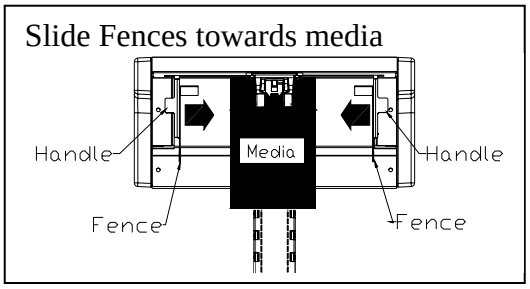
Press lever down.



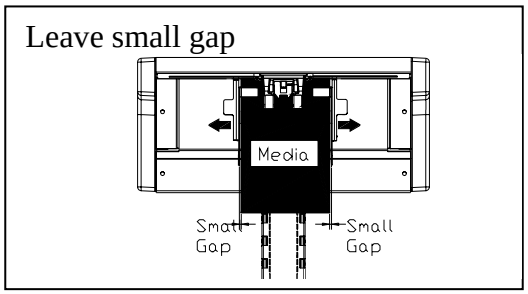
Hint: If you are experiencing feeding problems using post cards or stuffed media. Try out the suggestions listed for Post cards, Stuffed Media and Magazines & Booklets.

Setting the Sliding Fence

1. Set one or a few pieces of media in the center of the Feeder.



2. Grab the handles on the sides of both fences and push the Fences towards the media. Both Fences will move simultaneously towards the media to trap it between the Inner & Outer Fence. Push the fence up against the side of the media.

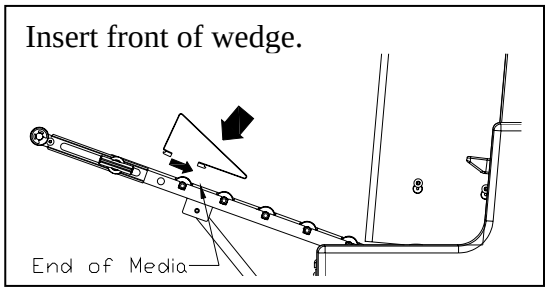


3. Move one of the fences back to leave a gap the width of a envelope between the media and the fences. The fences have to be close enough to keep the media from going in at an angle but loose enough to allow the media to freely drop down onto the Feed Rollers.

Setting the Media Support Wedge

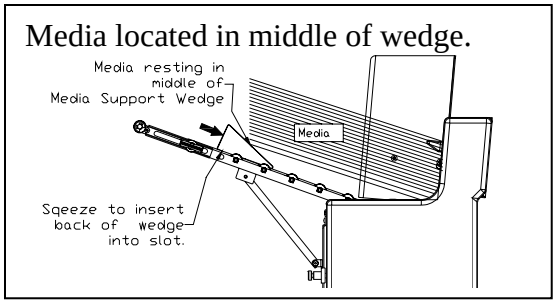
1. Lift the media up from the Feed Ramp Assembly. Take notice where the end of the media rests on the Feed Ramp Assembly.

2. Locate where the end of the media was and insert the front end of the Media Support Wedge and then push forward to hook in the slot. This will place the Media Support Wedge so the media is halfway up the angled front edge.



3. Slightly squeeze the back of the wedge to insert it into a slot.

4. Release the wedge and the tension will lock the wedge in place. Now lower the media down. Check that the bottom piece of media is almost halfway up the Media Support Wedge.

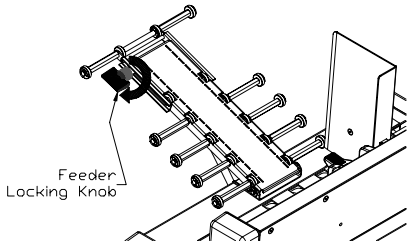

Media located in middle of wedge.
Media resting in middle of Media Support Wedge
Media
Sqeeze to insert back of wedge into slot.

Setting up and using the Feed Ramp Extension

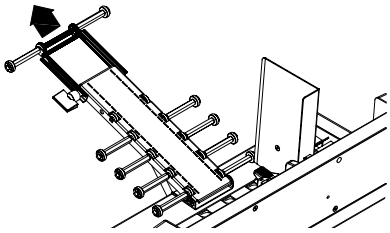
Overly long media is accommodated using the Feed Ramp Extension, also it will perform the same functions as the Media Support Wedge does with much shorter media.

1. Place a piece of the media on the Feed Ramp Assembly.
2. Turn to loosen the Feeder Locking Knob.
3. Pull the Feed Ramp Extension out from the Feed Ramp Assembly.
4. Angle the Feed Ramp Extension up to create a small gap between the media and the Feed Ramp Assembly.
5. Turn the Feeder Locking Knob to secure the Feed Ramp Extension. **Note**: The gap and angle of the Feed Ramp Extension will vary with the type of media used. Adjust the angle of the Feed Ramp Extension or Feed Ramp itself if the Feeder Assembly is having difficulty consistently supplying the printer with media.

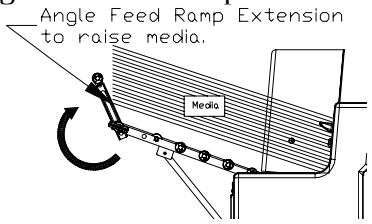
Loosen the Locking Feeder Knob.



Pull the Feed Ramp Extension out.



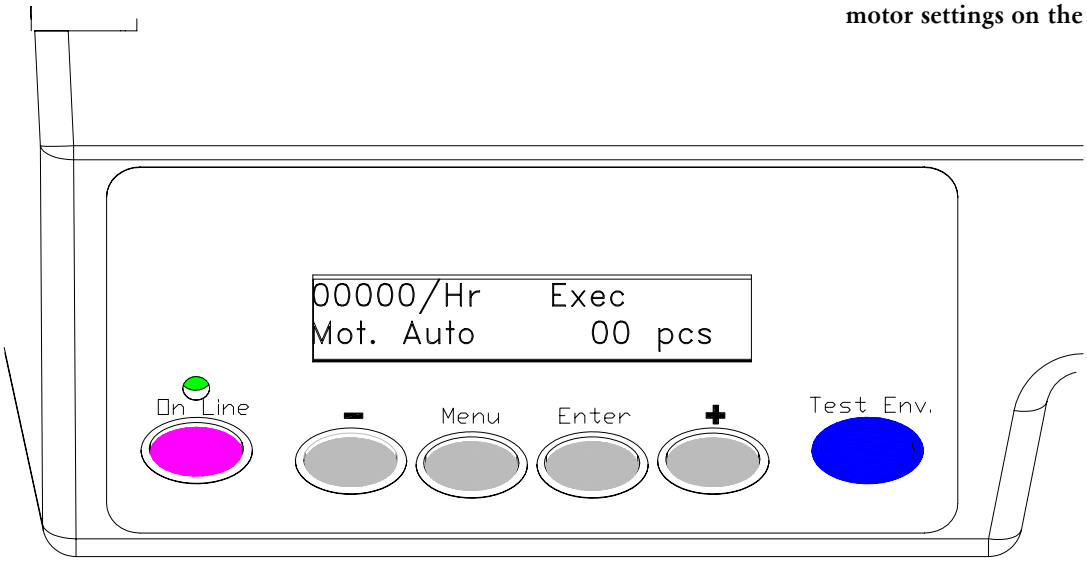
Angle the Feed Ramp Extension up.



Front Panel Controls and LCD Display

Use the controls on the Front Panel Assembly, consisting of six control buttons and an LCD display, to set up the Addressing Printer for proper operation with the computer system.

Note: Press the [+] & [-] buttons simultaneously to change the motor settings on the printer.

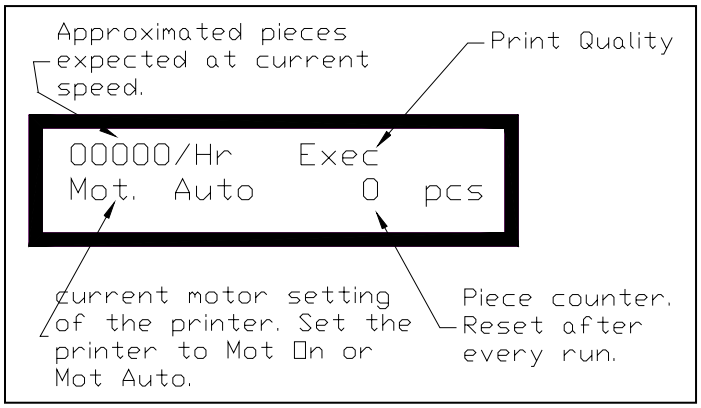


The control button definitions are:

Button	Function
[ON LINE]	Toggles the printer either On Line or Off Line. Begins printing accepted address data (records) from the computer or data in the buffer. Exits the menus with out changing menu settings. Allows the printer to resume printing after an error occurs.
[TEST]	Prints a internal test message. Hold down for continuous printing of the test message. Prints menu settings and internal alignment patterns for the printer when in the appropriate menu.
[MENU]	Press the [**Menu**] button to access the Main Menu. Press and hold the [**Menu**] button for two (2) seconds to access the Setup Menu.

	Depress the [**Menu**] and **[-]** buttons to access the Service Menu. Exit the control panel menus. First press [**Enter**] to save a menu setting.
[ENTER]	Selects a menu option displayed on the control panel. Saves a new menu setting. An asterisk (*) will appear to the right of the value to indicate the new value has been entered.
[+] / [-]	Scroll up **[+]** and down **[-]** through the menu options. Enters a YES **[+]** or NO **[-]** for a particular menu option. Use both keys together to start the printers transport motor to run continuously or to set the printer so it will only run when data is sent to the printer.

What does the display show?


Approximated pieces expected at current speed.
Print Quality
00000/Hr Exec
Mot. Auto 0 pcs
current motor setting of the printer. Set the printer to Mot On or Mot Auto.
Piece counter. Reset after every run.

Conventions used in the Printer Menu System section.

Bold with brackets is used for the **[Menu], [On Line], [Enter], [+] Plus, [-] Minus** buttons when they must be pressed to program or operate the printer.

Special fonts are used to highlight words that appear on the LCD display, and menu options: i.e. MAIN MENU, SETUP MENU. *Italics* are used to define the function of the printer menu option.

Main Menu

Use this menu to choose the format and style of address printed and for information to assist in production. Selected menu options from a sub-menu will appear first in the list of options.

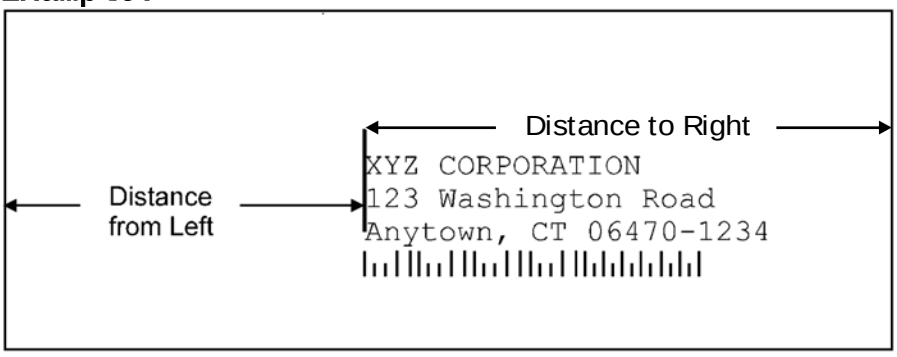
Note: The printer driver overrides most control panel settings in the printer. Some of the control panel settings are also configured in the printer driver.

1. ADDRESS LAYOUT

Use this option to change the page layout for your mail piece.

Menu Items	Selections	Explanation
A. Distance From Left	0.00 to 13.50	This menu option allows you to change the position of the record horizontally on the media. Records will appear upside down when viewed from the front of the printer. **Note**: This menu item only appears when the Orientation is set to Normal.

Example:



A. Distance to Right	0.00 to 13.50	This menu item only appears when the Orientation is set to Invert. This menu option allows you to change the horizontal position of the record on the media. Distance to Right is the distance measured from the Right edge of the media to the first printable character of a line (reading from left to right). Records will appear right side up when viewed from the front of the printer. **Note**: Setting this value too low will force long records to be clipped or create an error.
B. Distance From Top	0.00 to 3.00	This menu item allows you to change the position of the record without moving the Banks of Print

		Cartridges. The printer achieves this by reducing the available area used for printing. **Note**: Increasing the setting decreases the print area. The recommended setting for Distance From Top is 0.00.
C. Line Spacing	Automatic 3 lines / inch 4 lines / inch 6 lines / inch 8 lines / inch	This sets the distance between lines of text. It is measured as the number of lines per inch of text. Note: Whenever changing the point size of the font, use the automatic line spacing option. The printer will automatically select the correct setting for the increased or decreased font size of the characters being printed.
D. Orientation	Normal or Invert	This item changes the direction that the print appears on the media. *Normal* prints upside down when viewed from the front of the printer. *Invert* reverses the print 180 degrees. The print is right side up when viewed from the front of the printer. Setting the printer to Invert changes the menu choice from Distance From Left to Distance To Right.

2. PRINT QUALITY

This option changes the number of dots sprayed to print characters or graphics on the media. Changing the amount of ink sprayed also affects how fast the Transport Belts are capable of running. The LCD display will show the new item whenever the Print Quality is changed. These menu items are available in the printer driver and override the control panel settings.

Menu Items	Explanation
Executive	This is the darkest of the four print qualities, the slowest print speed and uses the most ink.
Letter	Letter quality is used for documents that require a finished, polished appearance.
Draft	Draft quality will print documents fast and save ink.
Super Draft	This option offers the highest print speed and prints the lightest of the four print qualities.

3. FONT

Use this option to alter the fonts characteristics: typeface, point size, spacing, stroke weight, and style. The printer driver downloads Windows True Type fonts and overrides internal fonts selected through the control panel.

Menu Items	Selections	Explanation
A. Name	Courier San Serif Roman Baxter Dingbat Hancock Marina Quincy Silicon Springer Stencil Windmill	Select the style of the internal font to print the records with.
B. Size	**4** to **30**	This item changes the size of the internal font.
C. Width	Condensed (50%) Thin (75%) Normal (100%) Wide (125%) Expanded (150%)	This item to changes the width of spaces between characters and the width of characters. ***Normal (100%)*** print width is the standard width of characters and spaces between characters. *Thin* (75%) and *Condensed* (50%) will decrease the spacing between characters and decrease the width of characters. *Wide* (125%) and *Expanded* (150%) increase the width of characters and spaces.
D. Bold	On or Off	This item increases the character stroke weight (thickness of print).
E. Italic	On or Off	This item refers to the *oblique shape* of a character.
F. Outline	On or Off	This item prints only the outline or the edge of the fonts shape. All the records printed using Outline will appear as *hollow text*.

4. BARCODE

Use this option to print a USPS (US Postal Service Postnet Barcode) barcode on the piece of media and to place it above or below the record. **Note**: A CASS certified mailing program is recommended when generating a USPS barcode. The requirements to print a USPS barcode are shown in Appendix H.

Menu Items	Selections	Explanation
A. Location	Above Address Below Address Off	Select the US Postal Service Postnet Barcode options from the following selections: ABOVE ADDRESS: Prints the barcode in the address block above the first line of the address on the media. BELOW ADDRESS: Prints the barcode below the last line of the address in the address block on the media. OFF : Stops the printing of a Delivery Point Barcode (DPBC) on the media. **Note**: This option has the printer generate the USPS barcode.
B. 5 Digit On/Off	On or Off	This item prints a 5 Digit barcode for a five digit zip code. **Note**: Only a 5 Digit barcode is printed for a five digit zip code when enabled. A Delivery Point Bar Code cannot be generated from a five digit zip code.
C. Bar Width	6 to 12	This item will increase the width or decrease the width of the bars generated for the USPS Postnet and Planet barcodes. Select this item to counteract the variance in the barcodes due to material, print quality, inks, etc.

5. ADDRESS RECOVERY

When something goes wrong while printing use this option to direct the printer to re-print up to 99 of the last records or to clear the printers memory of all records.

Menu Items	Selections	Explanation
A. Get Addresses	NONE TO RECOVER or 00 to 99 Press the [**Enter]** button to select the	This option retrieves up to 99 records from the data buffer. The display will say 00: and show the first 16 characters of the last address printed. If *NONE TO RECOVER* is first displayed then the data buffer is

	record and advance the display to the next to last record.	empty.
B. Clear Memory	Yes or No	This option removes any data left in the data buffer. The alternative way to clear data from the Data Buffer is to press the **[+]** plus and **[–]** minus buttons simultaneously.

6. CLEAR COUNTER

Use this option to clear the piece (batch) counter back to zero.

Menu Items	Selections	Explanation
	Yes or No	This option resets the counter to zero on the display. Select No to leave the current number of pieces printed (*pcs*) on the LCD display.

7. JOB SETTINGS

The printer has the ability to save or load up to eight different menu presets into memory. This is extremely useful for a quick setup of the printer for redundant tasks.

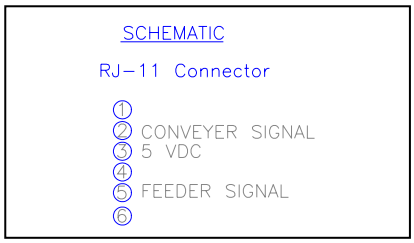
Menu Items	Selections	Explanation
A. Load	**1** to **8**	This option changes the printers menu settings such as size and type of font, the lines per address, etc.
B. Save	**1** to **8** Press the [**Test]** button to printout the current menu settings.	This option saves the current menu setup or configuration as a job number (1 through 8). Make a record of the menu configurations for each job number by pressing the [**Test**] button to get a printout after the job number is saved.

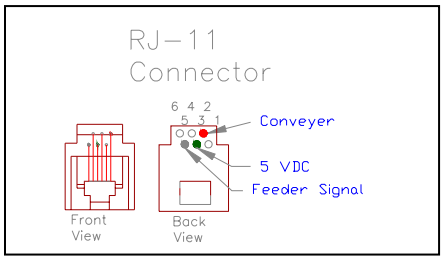
8. CONVEYER TIME

This item increases the length of time the conveyer will stay on. Generally, when the print quality is set higher than draft, and / or, print width is larger than normal, the drying time of printed records must be increased to prevent smearing or smudging of addresses. Special consideration of ink drying time and media handling for glossy or tyvek media should also be considered when using a conveyer.

Menu Items	Selections	Explanation
	0.00 to **2.00** seconds	This item modifies the amount of time the conveyer continues to run after printing a record. Changing the time for the conveyer to remain running alters how the media is shingled on the conveyer.

Use a 5 volt DC relay switch or a **Bryce Pulse Box** inline with the Accessory Port and the Conveyer when connecting to the 5 VDC line [Pin 3] and the Conveyer Signal line [Pin 2]. Reference the Schematic for the pins to use when connecting to the Conveyer Port. (See Section K for ordering information)





9. IMAGE OVERLAY

This menu item is used in conjunction with the Overlay Printer Driver. Use this option to print redundant text or graphics in the same location on every piece. The Image Overlay option is best used for printing a company logo and return address.

Menu Items	Selections	Explanation
A. First Image Overlay	Enable or Exit	This option saves the very first record or graphic received into the printers' memory as an overlay.
B. Clear Overlay	Press [**Enter**] to Clear or Exit	This option clears the overlay data in the printers' memory.
C. Print Overlay First	Enable or Disable	This option prints the data sent for the overlay onto the first piece. Use this piece to verify the location of the overlay is correct.

10. PURGE PRINT HEAD

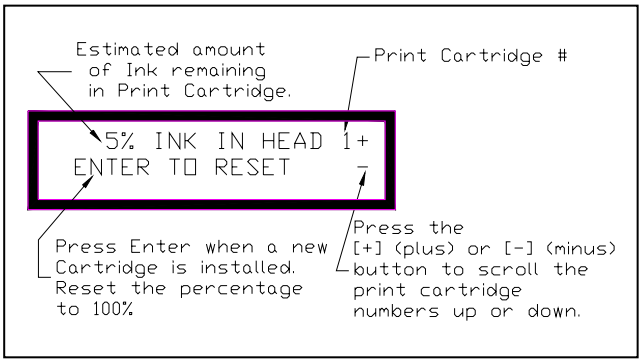
This menu item is to clean the ink jet cartridge nozzles. The purge process fires all the ink jet nozzles onto a piece of media to dislodge and clear any dried ink on the print nozzles. Often this will return the print quality to a normal level.

Menu Items	Selections	Explanation
	Yes or No	This item will fire all the nozzles of a print head onto a piece of media. **Note**: Once the purge is started the **[-]** minus button may be pressed to stop the cycle.

11. RESET INK COUNT

The printer calculates the amount of ink used by each of the Print Cartridges. When the red led on a Print Head Assembly starts to blink it is a signal that one or more of the Print Cartridges is less than 5% full and it must be changed relatively soon. After new Print Cartridges are installed the Ink Count needs to be reset to stop the red led from blinking.

Menu Items	Selections	Explanation
	1,2,3,4,5,6	This item displays the estimated amount of ink remaining in the print cartridge(s). Press the **[+]** plus or **[-]** minus button to scroll through the print cartridges 2,3,4,5 and 6. When the desired Print Cartridge number is displayed, press the [**Enter]** button to reset the percent ink to 100%.


Estimated amount of Ink remaining in Print Cartridge.
Print Cartridge #
5% INK IN HEAD 1+
ENTER TO RESET
-
Press Enter when a new Cartridge is installed. Reset the percentage to 100%
Press the [+] (plus) or [-] (minus) button to scroll the print cartridge numbers up or down.

Note: The calculation used to determine the percentage of ink available is based on the HP 51645A Print Cartridge or the HP 51645A Ink Reservoir System.

SETUP MENU

The Addressing Printer has a Setup Menu that lets you configure the Addressing Printer so it will function correctly with the computer and computer software. Use the Setup Menu to also display the menus in another language besides English. Hold down the [**Menu]** button for two (2) seconds until SETUP MENU is displayed on the first line of the LCD. Select the desired menu option when it appears on the second line of the LCD.

1. STOP ON FEED ERR (ERROR)

Use this option to stop the printer from feeding more media when an error occurs. Otherwise the printer will continuously feed media until the record is accurately printed before continuing onto the next record. Stopping the printer when an error occurs is helpful when the media is in short supply.

Menu Items	Selections	Explanation
	`Off` or `On`	This item stops the printer from operating after a "Early Feed Error" occurs.

2. FEEDER SIGNAL

The Feeder Signal option is for feeders that work with 5-volt DC signals. The printer will give a signal to the feeder when it receives one or more records. When the Stop On Feed Error option is turned ***ON*** and an error occurs the feeder signal will be cleared to stop the feeder. See Section Connecting to the Conveyer /Feeder Port.

Menu Items	Selections	Explanation
`A. None`	Press the [**Enter]** button to select this item.	This item disables the Feeder Signal option.
`B. On /Off Control`	Press the [**Enter]** button to select this item.	This item turns a 5 volt signal on whenever one or more records are in the buffer to be printed. The signal is turned off (0 volts) once the last record in the buffer is being printed. **Note**: The signal will also be turned off (0 volts) when a "Early Feed Error" occurs while the Stop On Feed Err (Error) option is enabled.
`C. Pulse Off Control`	Press the [**Enter]** button to select this item.	This item turns on a 5 volt signal when the sensor detects the piece to print the last record in the buffer on. The signal is turned on (5 volts) once the sensor detects the piece to print the last record in the buffer on.

C. (Continued)	Selections	Explanation
		The signal is then turned off (0 volts) a second later. **Note**: The signal is turned on (5 volts) when a "Early Feed Error" occurs while the Stop On Feed Err (Error) option is enabled. If the Pulse Off Signal option is selected, the external feeder signal will be asserted when the leading edge of the envelope for the last address to be printed is detected at the print heads or when an early feed error is detected (if the Stop On Feed Err option has been selected). In either case, the signal will be cleared 1 second later.
D. On / Quick Off	Press the [**Enter]** button to select this item.	This item turns a 5 volt signal on whenever one or more records are in the buffer to be printed. The signal is turned off (0 volts) once the sensor detects the piece to print the last record in the buffer on. **Note**: The signal will also be turned off (0 volts) when a "Early Feed Error" occurs while the Stop On Feed Err (Error) option is enabled.
E. Signal Polarity	Active ON or Active OFF Press the [**Enter]** button to select this item.	This item reverses the signal used to trigger the feeder. The Signal Polarity only affects the ON/OFF Control and ON/Quick OFF menu items. Active ON activates an external feeder by switching on the feeder signal. Active OFF activates an external feeder by switching the feeder signal off.

3. LINES PER ADDRESS

Set the number of lines of text the record will consist of when printing onto the media.

Menu Items	Selections	Explanation
	1 to 66	Set the number of lines to match the number of lines in a record that will be sent to the printer.

4. LINE TERMINATION

This item allows the printer to interpret what the Line Termination (end of a line of text) is for different operating systems or software. Choose from the various Line Termination formats to get the correct line count and then the record will print correctly.

Menu Items	Selections	Explanation
	CR=CR;LF=LF CR=CR+LF;LF=LF CR=CR;LF=CR+LF CR=CR+LF;LF=CR+LF	The typical software line termination is CR = CR; LF = LF. If your software is not typical then the Line Termination can be modified.

5. HEX DUMP MODE

Utilize this option to print the raw ASCII data (HEX Code) that is being sent to the printer.

Menu Items	Selections	Explanation
	Off or On	Prints the ASCII data being sent to the printer. The media width must be a minimum of 7 1/2" or 191 mm when running in HEX Mode. The page orientation, margins and number of lines are defined by the ***ADDRESS LAYOUT*** and ***LINES/ADDRESS***. The maximum number of usable lines is 16. **Note**: Clear the data buffer before sending data to the printer.

6. LANGUAGE

Customize the printer to match the keyboard of your printer, convert measurements from inches to millimeters and translate the menus from English. Most menus that use inches for measurements are converted to millimeters.

Menu Items	Selections	Explanation
A. Symbol Set A. (Continued)	ISO 6 ANSI ASCII ISO 69 FRENCH ISO 21 GERMAN ISO 4 UK ISO 60 NORW / DAN ISO 11 SWED / FIN ISO 15 ITALIAN ISO 17 SPANISH ISO 61 NORW /	Match the printers' International Standards Organization (ISO) symbol sets and substitution tables to the one used by the software. The printer has International Standard Organization (ISO) language symbol sets to use when printing in another language. A symbol set contains collections of the symbols and characters that make up a language. For a listing of the characters for the ISO symbol sets see Appendix D. **Note**: The character set CP1250 is only available after the polish characters are installed on the machine.

Menu Items	Selections	Explanation
	DAN ISO 10 SWED / FIN ISO 16 PORTUGUESE ISO 8859 ROMAN 8 WINDOWS LATIN 1 PC 8 CP 1250	
B. Inch / Millimeter	Inch or Millimeters	This option converts the printer measurement system from inches to millimeters and vice versa.
C. Menu Language	ENGLISH GERMAN FRENCH ITALIAN SPANISH DUTCH POLISH JAPANESE	This option will convert the Main Menu and Setup Menu to their translations in the listed languages.

7. TRANSPORT SPEED

Use this option to change the transport speed of the printer.

Menu Items	Selections	Explanation
	50% to 100%	Select this item to decelerate the transport belt to increase drying time for the ink and assist in the handling and sorting of the media by decreasing the throughput. Varying the speed of the transport belt will not affect the print quality.

8. POSTAL BUNDLE BRK (BREAK)

This option will stop the printer for a few seconds before proceeding to print the rest of the records. This allows time for bundling the presorted records together and separate the bundle from the next batch of records being sent to the printer. Use the menus to customize the command to suspend operation and to set how long the printer must wait before it resumes operating.

Menu Items	Selections	Explanation

A. Enable/Disable Break	Off or On	Select the type of command the printer must receive before it stops the feeder to set a gap between batches while it is operating. The marker to set a break consists of the repetition of a single character appearing on a single line to start the printer to pause. The Example below displays what the printer is looking for before pausing the print job.

Example of using a series of 3 '#' characters in the Horizontal Break Marker setting to pause the printer.

###
****************23**
XYZ Corporation
123 Washington Road
Anytown, CT 06470-1234

Menu Items	Selections	Explanation
B. Break Character	! " # $ % & ' ( ) * + - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ? @ A B C D E F G H I J K L M N O P Q R S T U V W X Y Z **Note**: Send the [SOH ASCII (01)] character to trigger a Postal Bundle Break.	This option sets what character the printer must receive before it will momentarily halt working. The list of characters to select from are: **! " # $ % & ' ( ) * + - . /** **0 1 2 3 4 5 6 7 8 9** **: ; < = > ? @** **A B C D E F G H I J K L M N O P Q R S T U V W X Y Z** These characters and symbols range from [! ASCII (33)] to [Z ASCII (90)] in a ASCII Table.
C. Break Char Count	01 to 10	Set the number of occurrences the character or symbol must appear in succession before the printer can send a Postal Bundle Break signal.
D. Pause Time	0.00 to 31.75	Set the length in seconds for the Feeder to sit idle before sending another piece of media.

The printer will send a signal to the feeder to stop between the batches of records. Use a 5 volt DC relay switch inline with the Accessory Port and the Feeder when connecting to the 5 VDC line [Pin 3] and the

Conveyer Signal line [Pin 2]. Reference the Schematic for the pins to use when connecting to the Conveyer Port.

9. PRE-PURGE

Use this option to keep the print heads from drying out and to clear the inkjet nozzles automatically while operating the printer.

Menu Items	Selections	Explanation
A. Purge at Start	**Disable or Enable**	If you have long breaks of twenty seconds or more before starting another batch of records this option will purge on the first piece before printing the records.
B. Periodic Purge	**Disable or Enable**	This option will activate the periodic purge.
C. Purge Interval	**020 – 240 seconds**	This option will purge the ink cartridges at timed intervals on a piece. Set the time to determine when to purge the ink cartridges. The feeder will pause for a few seconds after the purge pattern is printed. Each timed interval begins from the last purge print pattern.
D. Nozzle Keep Alive	**Disable or Enable**	This option will randomly purge the individual nozzles of the print cartridges to keep the ink from clogging the nozzles and to create a virtually invisible pattern of dots on the media. The printer will continually purge except when another pre-purge is pending and while the records are being printed.

10. FEED GAP

Two settings are available to modify how the printer reacts Use this option to help when feeding very glossy media or short media. (Only available with the Bryce Feeder Assembly)

Menu Items	Selections	Explanation
A. Selectable Gap	3.10 in to 12.70 in	This item increases the gap or space between pieces of media as it is fed through the printer. Increasing the gap will slightly reduce the overall throughput of the printer.
B. Stream Feed	Press the **[Enter]** button to enable this option and disable the Selectable Gap.	This option gives the each record a fixed time before printing on the next piece. This option is best used to print small records of three or less lines of text.

11. ROM REVISION#

This option displays the Firmware Revision installed in the printer and the total number of accumulated print cycles (maintenance count).

Menu Items	Selections	Explanation
	Press the [**Test**] button when ROM REV. is displayed on the LCD. A list of the Main Menu and Setup Menu settings is printed on four pieces of media.	The LCD display will give a momentary view of the ROM Revision and the Maintenance count.

12. PRINT HEAD SIZE

Enable this option for the printer to keep track of the ink usage for the HP 51645A ink cartridges or the ink reservoir system.

Menu Items	Selections	Explanation
	Normal Capacity or Extended Capacity	Select the type of Print Cartridge being used with the printer. Changing the Print Head Size alters how the percentage of ink used is calculated for the menu item *12. RESET INK COUNT*. **Note**: The reservoir system is nine times the volume of a HP 51645A ink cartridge.

SERVICE MENU

Use this menu for adjusting the print heads in each bank, the banks to each other, checking the transport and sensors and testing the display for proper functionality. The menu options that are preceded with a star or Asterisk (*) are the printers' current settings.

1. ADJUST PRINT

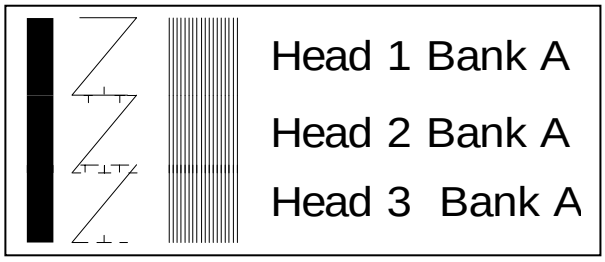
The following steps are for synchronizing the Print Cartridges on the 3 Head Print Assembly (Bank A) and the 3 Head Print Assembly (Bank B). Employ the options I. BANK A to BANK B to help in combining the 3 Head Print Assemblies for printing together or separately.

Menu Items	Selections	Explanation
A. Head 2 up down B. Head 3 up down C. Head 5 up down D. Head 6 up down	280 to 300 Press the [**Test]** button to print out a Test Pattern. Check the Test Pattern to determine which Print Cartridges are in need of Vertical Synchronization.	Use options A through D to vertically synchronize the individual Print Cartridges in Bank A and Bank B.

The following is an example of how to synchronize Print Cartridges for Bank A. The same techniques used for Bank A can be applied to Bank B.

Example:

Print out an adjust print Test Pattern by pressing the **[Test]** button while in the *Adjust Print* menu. The printer will print a Test Pattern like the example to the right.

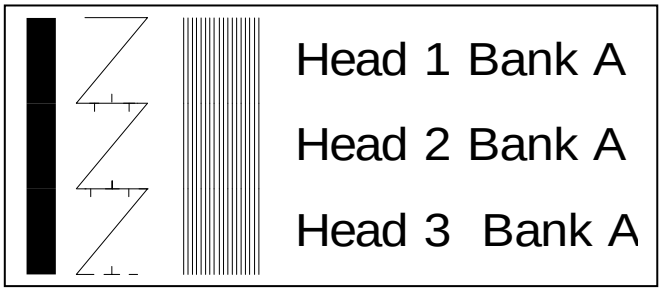


In this example the crooked line in the center indicates Print Cartridge #3 has to have the printer perform a vertical print adjustment. The example shows Print Cartridge #3 is too high.

Scroll through the Adjust Print menu options until the *HEAD 3 UP DOWN* option is displayed on the LCD panel.

Enter the menu option to move the setting down. Enter the new value into the printers memory. An Asterisk (*) will appear in front of the new selection. Press the [**Test]** button to print another Test Pattern. The Test Pattern is printed using the entered selection.

When the correct numeral is selected the center Test Pattern will be one long crooked line with hatch marks like the example to the right.

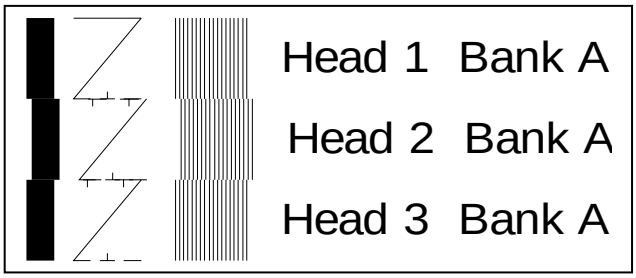


E. Head 2 side to side F. Head 3 Side to Side G. Head 5 Side to Side H. Head 6 side to side	01 to 99 Press the [**Test]** button to print out a Test Pattern. Check the Test Pattern to determine which Print Cartridges are in need of horizontal Synchronization.	Use the options E through H to horizontally synchronize the individual Print Cartridges in Bank A or Bank B. When a line of print is split apart or the left edge of a block of lines don't line up with the left edge of the other lines the Print Cartridges have to be synchronized horizontally. Perform a horizontal adjustment whenever the wide solid line and the set of 18 thin vertical lines do not form long vertical lines for the whole bank of Print Cartridges.

The following is an example of how to synchronize Print Cartridges for Bank A. The same techniques used for Bank A can be applied to Bank B.

Example:

Print out an adjust print Test Pattern by pressing the **[Test]** button while in the *Adjust Print* menu. The printer will print a Test Pattern like the example on the right.



In the example to the right the wide vertical line on the left and 18 thin vertical lines indicate Print Cartridge #2 needs a horizontal print adjustment. The example shows Print Cartridge #2 is to far to the right.

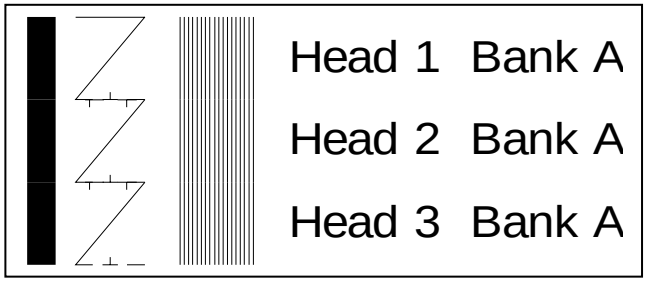
Scroll through the Adjust Print menu options until the *HEAD 2 SIDE TO SIDE* option is displayed on the LCD panel. Select this menu item to change the settings.

Press the [-] button to scroll the values down and move Head 2 left.

Press the [**Enter]** button to select the desired value. An Asterisk (*) will appear in front of the new selection.

Press the [**Test]** button to print another Test Pattern. This time the Test Pattern is printed using the entered selection.

When the correct numeral is selected the wide line and the set of 18 vertical lines form long vertical lines down the entire Bank A of Print Heads.

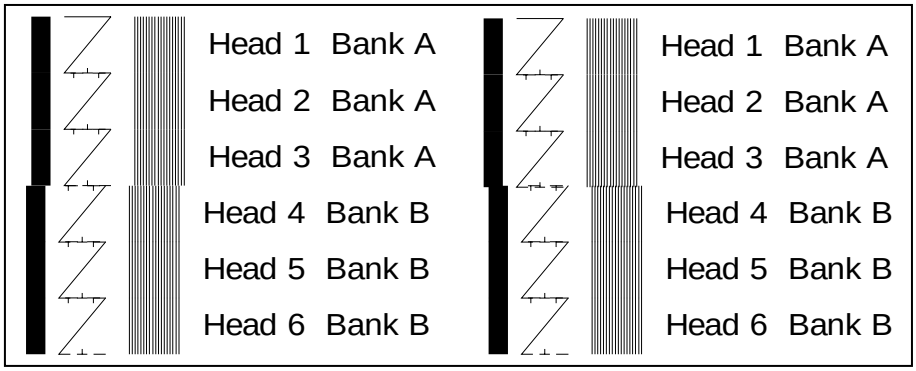


I. Bank A to Sensor	00.500 to 36.000 Press the [**Test]** button to print out a Test Pattern. Check the Test Pattern to determine where Banks A is printing on the media.	Use this option to set this distance between the sensor and the first head in bank A. Set each Bank of Print Heads to work together (synchronized) or to work independently in different locations on the media. Check the Test Pattern to determine which Banks are in need of synchronization or for relocating the position of a bank on the media.
I. Bank B to Sensor	00.500 to 36.000 Press the [**Test]** button to print out a Test Pattern. Check the Test Pattern to determine where Banks B is printing on the media.	Use this option to set this distance between the sensor and the first head in bank B. Set each Bank of Print Heads to work together (synchronized) or to work independently in different locations on the media.

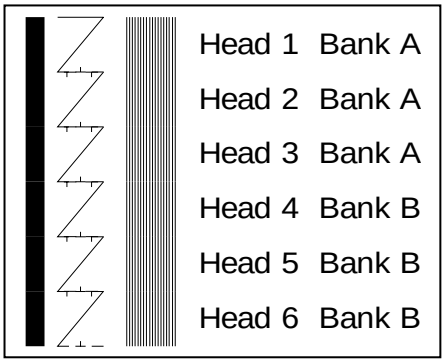
For ease of illustration the following example will deal with synchronizing Bank A and Bank B together. It is assumed the Banks of Print Heads have already been mechanically aligned next to each other

Example:

Print out an adjust print Test Pattern by pressing the **[Test]** button while in the *Adjust Print* menu. The printer will print a Test Pattern like the example on the right. The adjust print Test Pattern consists of three rows of different patterns, the first wide line and the eighteen vertical lines are used for synchronizing Bank A and Bank B.


Head 1 Bank A
Head 2 Bank A
Head 3 Bank A
Head 4 Bank B
Head 5 Bank B
Head 6 Bank B
Head 1 Bank A
Head 2 Bank A
Head 3 Bank A
Head 4 Bank B
Head 5 Bank B
Head 6 Bank B

When the two pattern do not match to form long vertical lines, perform the following steps. In the example to the right the wide vertical line on the left and 18 thin vertical lines indicate Bank B needs a horizontal print adjustment. **Rule of Thumb**: Take the distance from the previous bank of print heads that want to align the next bank with and add 3.5 inches. As an example if Bank A is 7.000 then Bank B starts at 10.500.



Press the [**Enter]** button to select the desired value. An Asterisk (*) will appear in front of the new selection.

When correct all vertical lines should be straight.

2. TEST SYSTEM

Use this option to check the mechanical and / or electrical operation of the Address Printer.

Menu Items	Selections	Explanation
	Press the [**Enter]** button to select this option. As soon as, the [**Enter]** button is pressed, the printer will be in the test mode. To test the motor, press the **[+]** button to start increasing the motor speed or **[-]** button to decrease the speed.	The sensor is represented on the LCD by the lowercase letter ***p*** or the upper case letter ***P***. The LCD display shows a lower case letter of ***p*** (sensor unblocked) when the sensor is clear. When the sensor has media in the path the capitol letters ***P*** (sensor blocked) is shown. When a Feeder Assembly is attached the Feeders' motor can also be tested. Press the [**Enter]** button to select between the BELT (printer motor) or FEEDER (Feeder motor) options. An asterisk will appear before the selected option.

3. TEST DISPLAY

Use the test display option to help determine if the LCD display is not functioning properly i.e. missing characters, strange characters, missing segments, etc.

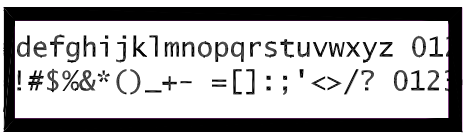
Menu Items	Selections	Explanation
	Press the [**Enter]** button to select this option. As soon as, the [**Enter]** button is pressed, the printer will be in the test mode.	The test display will scroll characters across the top and bottom of the LCD display.

EXAMPLE:

The LCD display will scroll the lower case alphabet and numerals (0-9) across the top line, while the bottom line will scroll control characters and the numerals. The Test function will cycle twice and return to the Service Menu. See example below for LCD display sample test message.

abcdefghijklmnopqrstuvwxyz 0123456789

\->!#$%&*()_+- =[]:;'<>/? 0123456789



Example of LCD display with characters scrolling across

Users Manual Symptoms & Solutions Chart

SYMPTOM	CAUSE	SOLUTION
Nothing happens when power is switched on	No Power to printer.	Check Power Cord. Call Service Representative.
	Fuse is blown	Call Service Representative.
Display Problem (Blank LCD display).	Bad LCD	Call Service Representative.
LCD display shows miscellaneous Chinese characters.	Bad LCD	Call Service Representative.
LCD display shows solid black boxes or miscellaneous characters	Bad Processor Main Board	Call Service Representative.
	Bad Print Head Assembly	Call Service Representative.
Motor on, Transport Belt doesn't turn	Loose set screw on Motor Drive Pulley.	Call Service Representative.
	Broken belt	Call Service Representative.
(Motor Stall Error)	Media Jammed	Remove jammed media. Press Test button or On-Line to reset printer.
	Bad motor or seized bearing	Call Service Representative
	Bad Processor Board	Call Service Representative
Motor runs for a moment, turns off, LCD display indicates (Motor Stall Error)	Bad bearing on roller or bearing in pulley assembly.	Call Service Representative
	Belt Jam	Manually fix belt by gently pulling on belt side to side
	Bad Encoder or Processor Board	Call Service Representative

SYMPTOM	CAUSE	SOLUTION
Printer keeps stopping and starting every few pieces.	Postal Bundle Pause is enabled or set incorrectly. The SOH character is being sent to the printer.	Disable Postal Bundle Pause or correct the settings. Do a HEX Dump of the problem addresses. Examine for a SOH character (01) in the data. Remove the SOH character from the data.
Envelope jams (Paper Jam Error)	Media out of spec. Print Head Holder Assemblies set to low for this media.	Minimum thickness of media is 0.003” (0.00762 cm). Turn the Control Knob to raise up the Print Head Holder Assemblies.
Print Quality Problems (No print)	Ink Jet Cartridge problems Printing on belts or floor, address location set off the media Print Head Holder broken Sensor is dirty.	Purge ink jet cartridge. Clean cartridge with soft cotton cloth and water. Change to a known good cartridge. Correct position with Address Layout Menu Call Service Representative. Clean sensors with canned air or soft cotton cloth.
Non Uniform Print Quality	Print Cartridge not installed right Print Head Holder broken	Take the Print Cartridge out and reinstall into Print Head Assembly. Call Service Representative.
Ink Streaking on Media	Print Head Holder Assemblies set to low for this media. Adjustable wipers set incorrectly	Turn the Control Knob clockwise to raise the Print Head Move wipers to area without ink.

SYMPTOM	CAUSE	SOLUTION
Ink Print Quality is not sharp	Print Head Holder Assemblies set too high.	Turn the Control Knob counterclockwise to raise the Print Heads
	Media unsuitable	Change to a typical white wove bonded paper
Ink Print Quality problem. White stripes or lines through print.	Print Cartridge almost empty. (LED is blinking)	Replace Print Cartridge
	Dried ink clogging nozzles on Print Cartridge.	Purge Print Cartridge.
		Clean cartridge with soft cotton cloth and water.
		Change to a known good cartridge.
	Pins bent or broken on Print Head Holder.	Call Service Representative.
	Bad Board or Flex Circuit.	Call Service Representative.
Print Quality Problem (blanks between printed media)	Wrong setting in Lines Per Address.	Increase settings in Lines Per Address to match software.
	Sending media to quickly	Slow the speed the media is sent to printer.
	Faulty or dirty sensor.	Clean sensors with canned air or soft cotton cloth.
Print Quality Problems (Gray Print)	Print Cartridge almost empty. (LED is blinking)	Ink supply too low, Replace Print Cartridge
	Print Head Holder Assemblies set too high	Turn the Control Knob counterclockwise to lower the Print Head
Print Quality Problems (Characters are Printing Twice)	Incorrect Software Driver	Use 24K/30K driver or dump printer interface (TTY, Teletype, DOS text printer, Generic printer) or use Bryce 10K, Bryce 7600, P.B. W800 and P.B. W600.
	Bad or damaged Encoder	Call Service Representative.

SYMPTOM	CAUSE	SOLUTION
Print Quality Problems (Unwanted Bolding)	Main Menu setting of Bold is enabled	Press Test Button. A bold Standard Bryce Office Systems Address is printed. Turn Bold setting off in Main Menu.
	ESC sequence turning bold on, located before the address	Do a HEX Dump of the problem address. Examine for ESC sequence (1B) before the start of the line. Reference printer command codes to find ESC Sequence. Remove the ESC Sequence from the address.
Print Quality Problems (Addresses "walking") to next piece	Number of lines of address varies. No Form Feed used for address termination.	Do Hex Dump, count carriage returns (0D in hexadecimal code), and line feeds (0A in hexadecimal code). Set Address Setup in Setup Menu accordingly. If address ends with a form feed (0C in hexadecimal code). Set address setup to match the number of lines to Address Setup.
Interface problems (Garbage print)	Incorrect Software Driver	Use 24K/30K driver or dump printer interface (TTY, Teletype, DOS text printer, Generic printer) or use Bryce 10K, Bryce 7600, P.B. W800 and P.B. W600.
	Wrong Symbol Set selected in printer.	Select correct Symbol Set from printers Setup Menu.
Interface problems (Losing characters & lines)	Bad communications Cable	Replace internal or external cable
	Bad main processor board	Call Service Representative.
	Centronic (Parallel) over maximum length	Replace parallel cable, maximum length 10 feet (304.8 cm)
	Incorrect Software Driver	Use 24K/30K driver or dump printer interface (TTY, Teletype, DOS text printer, Generic printer) or use Bryce 10K, Bryce 7600, P.B. W800 and P.B. W600.
Overrun Error (Error Message)	Bad communications Cable or CPU I/O	Replace cable or Call Service Representative.

SYMPTOM	CAUSE	SOLUTION
Parallel Interface, printer is not printing (Printer Halted)	Bad data sent	Turn printer off, then turn printer on and send again.
	Bad communications Cable	Replace parallel cable, maximum length 10 feet (304.8 cm)
	Bad main processor board	Call Service Representative.
	Centronic (Parallel) Cable over maximum length	Replace parallel cable, maximum length 10 feet (304.8 cm)
	Incorrect Software Driver	Use 24K/30K driver or dump printer interface (TTY, Teletype, DOS text printer, Generic printer) or use Bryce 10K, Bryce 7600, P.B. W800 and P.B. W600.
Invalid Font Sig, (Error Message)	Signature of Font is invalid.	Turn printer off, then turn printer on and send again. If problem persists then call Service Representative.
Invalid Font CS, (Error Message)	Checksum on Font is invalid.	Turn printer off, then turn printer on and send again. If problem persists then call Service Representative.
No Font Found (Error Message)	Font is invalid.	Turn printer off, then turn printer on and send again. If problem persists then call Service Representative.
Out of Memory (Error Message)	Overuse of graphics / page information	Turn printer off then send again.
Q1 Out of Memory (Error Message)	Problems with too much Page information	Turn printer off then send again. Slow down feeder.
Q2 Out of Memory (Error Message)	Problems with too much Page information	Turn printer off then send again. Slow down feeder.
Graphic Too Complex (Error Message)	Overuse of graphics / page information	Turn printer off then send again.
Bad PCL Command (Error Message)	Incorrect PCL command received.	Turn printer off then send again. Remove bad PCL command from record.
Print Hd A Error (Error Message)	Problems communicating to Bank A	Turn printer off then send again. If problem persists then call Service Representative.
Print Hd B Error (Error Message)	Problems communicating to Bank B	Turn printer off then send again. If problem persists then call Service Representative.

SYMPTOM	CAUSE	SOLUTION
Print Head Error #1 Bank(s) A B (Error Message)	Problems communicating to both Bank A & B	Turn printer off then send again. If problem persists then call Service Representative.
Different Print Head Types in each bank (Error Message)	Problems communicating to one or the other Banks of Print Heads Mixed a new style of Print Head Holder Assembly with an old style of Print Head Holder Assembly.	Turn printer off then send again. If problem persists then call Service Representative. Bank A & Bank B must be the same style of Print Head Holder Assembly. Call Service Representative.
Battery Error (Error Message)	Battery is low and cannot maintain the printers' settings when powered down.	Call Service Representative.
No Barcode	Invalid Zip Code or more data following Zip Code. Five (5) Digit Zip Code turned off.	Check Zip Code and correct, remove any data following the Zip Code. (See Appendix H for valid DPBC format) The 5 digit zip code option in the print Main Menu is Off.
No Planet Code Printed	Invalid Code or more data following the PLANET Code.	Check Planet Code and correct, remove any data following the PLANET Code. (See Appendix H for valid PLANET code format)

Notes: _____

Symptoms and Solutions when using the Bryce Feeder

SYMPTOM	CAUSE	SOLUTION
Transport Belt turning, Feed Rollers won't turn. (Paper Out Error)	Feeder connector is loose.	Disconnect Feeder and reattach to Printer.
	Loose set screw on pulley or gears not engaging.	Call Service Representative
	Bad Feeder Motor or Loose pulley.	Call Service Representative
Early Feed Error (Error Message)	Faulty or dirty sensors	Clean sensors with canned air or soft cotton cloth.
		Call Service Representative.
Stream Feeding of the media (Early Error Message)	Thickness of Separator "H" Block is set to high	Reset the height of the Separator "H" Block.
	Feed Gap is too short for the media.	Increase the setting in the Feed Gap menu
	Faulty or dirty sensor.	Clean sensors with canned air or soft cotton cloth.
	Feed Roller is not stopping.	Call Service Representative.
Feeder is not sending media consistently. (Intermittent feed problem)	Thickness adjustment set incorrectly	Adjust the Separator "H" Block according to users manual.
	Stack of media is too small.	Place a larger stack of media on Feed Rollers.
	Feed Rollers glazed or contaminated with paper dust.	Clean with water and plastic scouring pad.
	Feed Ramp Assembly and Media Support Wedge is positioned or being used incorrectly.	Reposition Feed Ramp Assembly and Media Support Wedge to transfer the weight of media onto Feed Rollers.
	Feed Rollers worn down	Replace Front or Rear Feed Rollers.

SYMPTOM	CAUSE	SOLUTION
Feeder is not sending media to Printer (Paper Out Error Message)	Thickness adjustment set incorrectly	Adjust the Separator "H" Block according to users manual.
	Stack of media is too small.	Place a larger stack of media on Feed Rollers.
	Feed Rollers glazed or contaminated with paper dust.	Clean with water and plastic scouring pad.
	Feed Ramp Assembly and Media Support Wedge is positioned or being used incorrectly.	Reposition Feed Ramp Assembly and Media Support Wedge to transfer the weight of media onto Feed Rollers.
	Feed Rollers won't turn	Call Service Representative.
Envelope jams (Paper Jam Error)	Media out of spec.	Minimum thickness of media is 0.003" (0.00762 cm). Maximum thickness of media is 0.5" (1.27 cm)
	Media sticking together.	Fan media before placing on Feed Rollers.
Printer runs for a moment, turns off, LCD display indicates (Feeder Stall Error)	Media out of spec.	Maximum thickness of media is 0.5" (1.27 cm)
	Media sticking together.	Fan media before placing on Feed Rollers.
	Bad bearing on roller or bearing in pulley assembly.	Call Service Representative
	Belt Jam	Call Service Representative
	Bad Encoder or Processor Board	Call Service Representative
	Bad motor	Call Service Representative
Print looks skewed	Setup of Feeder Assembly for the media is incorrect.	Redo the media setup with the Feeder Assembly. See Section 5.

Notes: _____

Preventative Maintenance:

The 30K Printer is designed for trouble free service with a minimal amount of care. Periodic cleaning of the Sensor, Transport Belts, Floor and 3 Print Head Assemblies will be necessary.

CAUTION!!

CLEAN PRINT CARTRIDGE, INK SURFACES AND COVERS WITH PLAIN WATER.

ALL METAL AND PLASTIC CAN BE CLEANED WITH ISOPROPYL, DENATURED & RUBBING ALCOHOL OR WATER ONLY.

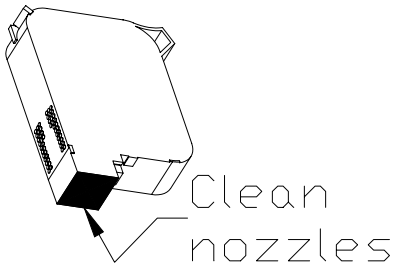
USING ANY OTHER CLEANING SOLVENTS WILL VOID ALL WARRANTIES.
Keep cleaning solvents with petroleum based products from rubber or plastic parts.

Cleaning the print cartridges

If the print quality is unacceptable select the Purge Print Head function from the Main Menu (See Section Purge Print Head). If problems still persist then do the following:

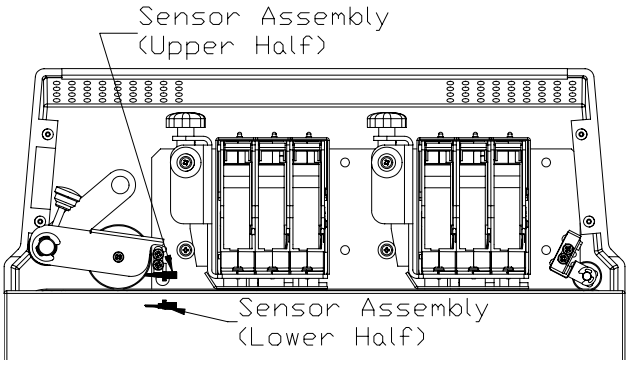
- Remove the Print Cartridge (See Section Remove Print Cartridges). Clean the nozzles with a soft cotton cloth. Use a dry cloth or one moistened with alcohol to clean the ink jet cartridge.
- Remove problem print cartridge and install a new print cartridge.

Perform a self cleaning (Purge Print Head) cycle at the start before printing and periodically while printing to keep the nozzles clear of dry ink and debris.



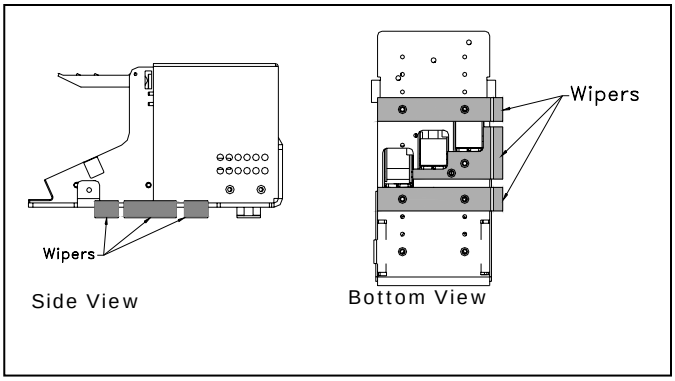
Cleaning the Photo Sensor Assembly

With use, a film and/or dust builds up on the eye of the sensor causing misfeeds of media. Periodically use compressed air to blow dust from the sensors. For caked on dust use a Q-tip to remove the dust from the eye of the sensor. **Note**: The lower half of the Sensor is seen through the hole in the floor.



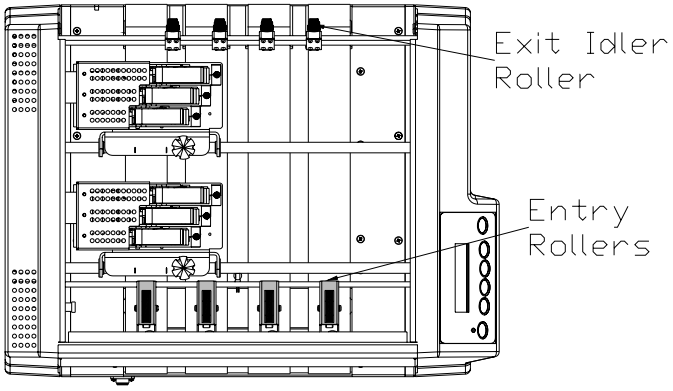
Cleaning the Wipers

The Wipers beneath the banks of Print Head Assemblies will over time pick up ink, wax, clay and other material from the media it touches. Once enough wax or clay, etc, accumulates on the wipers it will leave marks or smears on the media. Use water to dampen a soft cloth to remove any ink, wax, clay, etc. and keep the wipers clean.



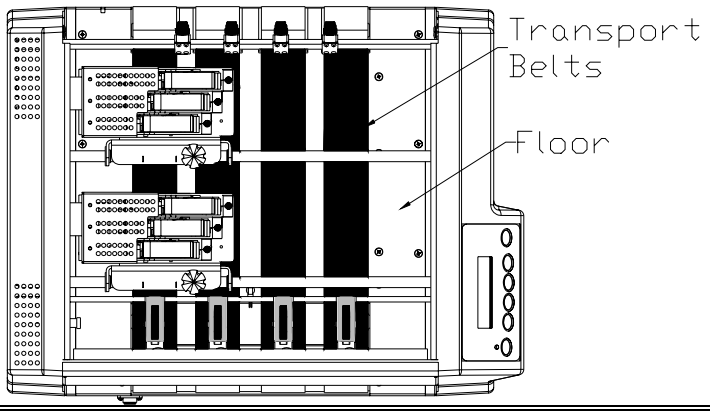
Cleaning the Exit Idler Roller & Entry Rollers

When the Exit Idler Roller is adjusted over the area where addresses are printed the ink will get transferred from the media onto the roller. Use water to dampen a soft cotton cloth to remove the ink from the rollers.



Cleaning the Transport Belts and Floor Assembly

Ink will get sprayed on the Transport Belts and the Floor Assembly from all the purging, setting up and printing records, etc. Eventually an adequate amount of ink will accumulate on top of the Transport Belts to give the belts a glossy sheen. Use water to dampen a soft cotton cloth to remove the ink from the Transport Belts and the Floor Assembly. Raise the Print Head Assemblies up and out of the way to clean the Floor Assembly.



Cleaning the Tires on the Feeder Assembly

Lint and paper dust will tend to build up on the feeders tires with use. Clean the tires as needed: when it is glazed or has yellowish residue. Use alcohol to dampen a soft cotton cloth or plastic scouring pad to clean all rubber tires.

The tires or sections of the tires will wear down differently depending on the variety of media used and where the areas of heavy use are. If cleaning the tires is ineffective in helping to feed the media into the printer, then reference the replacement procedures for the worn Tires on the Upper or Lower Feed Roller Shaft Assembly. (See Replacing the Tires on the Feeder Assembly)

Replacing the Tires on the Feeder Assembly

1. Lift the **Feeder Assembly** to unhook it from the printer. Pull the Feeder Assembly away from the printer.

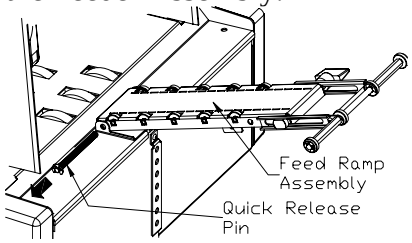
2. Disconnect the **Feeder Information Cable Assembly** from the Printer.

3. Remove the **Quick Release Pin** from the Feeder Assembly to disconnect the **Feed Ramp Assembly** from the Floor. Lower the Feed Ramp out of the way.

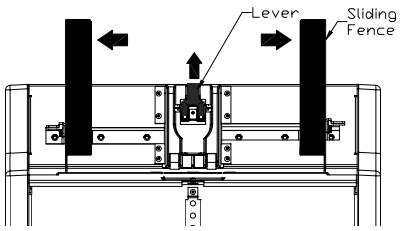
4. Push the Latch up to raise the Separator H-Block to the uppermost position and secure in place.

5. Pull the Sliding Fences wide open on the Feeder printer.

Pull the Quick Release Pin from the Feeder Assembly.

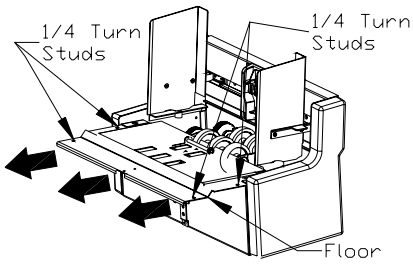


Lift Lever up and open Sliding Fences.



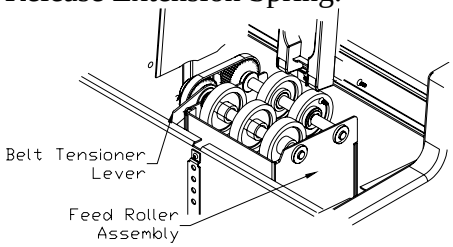
6. Using a regular screwdriver, release the four **1/4 Turn Studs** on the **Floor.** Turn each stud counterclockwise a quarter turn. **Note**: The four 1/4 Turn Studs are permanently attached and cannot be removed.

Slide Floor beneath Sliding Fences.



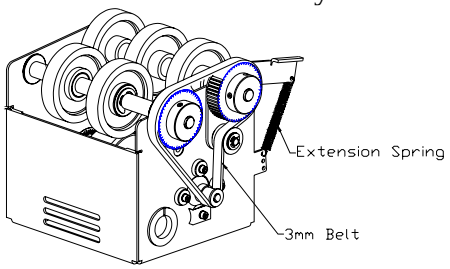
7. Lift the **Floor**. Unhook the front of the floor and slide it beneath the Sliding Fences.

Release Extension Spring.



8. Reference figure to right. Located inside is the Feed Roller Assembly. From the side of the assembly, release the Extension Spring from the Belt Tensioner Lever.

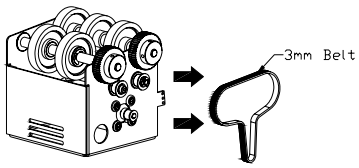
Walk belt off Feed Pulleys



9. Remove the 3 mm Belt from around the two Feed Pulleys. **Note**: The Feeder Assembly with two Idler Pulleys located in the center uses the Old Style belt.

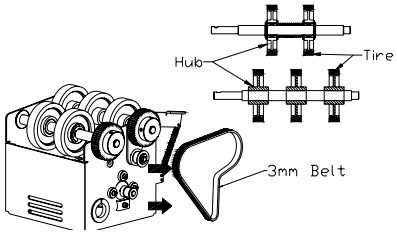
10. Pull the Upper or Lower Feed Roller Shaft Assembly from the printer. A bearing will come out with the feeder shaft assemblies. Remove these parts from the printer.

Pull the Tires off the hubs. (Old Style Belt)



11. The Tires may now be removed by pulling them from the hubs.

Pull the Tires off the hubs.



12. Replace in reverse order.

Appendix A • Bryce Office Systems 30K **MAIN MENU** Flow Chart

----MAIN MENU---- **1. Address Layout**	Address Layout **A. Dist From Left**	DIST FROM LEFT +MORE *4.50 in -LESS	DIST FROM LEFT +MORE *115 mm -LESS			
	Address Layout **B Dist From Top**	DIST FROM TOP +MORE *0.00 in -LESS	DIST FROM TOP +MORE *00 mm -LESS			
	Address Layout **C. Line Spacing**	LINE SPACING 3 lines/inch	LINE SPACING 4 lines/inch	LINE SPACING 6 lines/inch	LINE SPACING 8 lines/inch	LINE SPACING *Automatic
	Address Layout **D. Orientation**	ORIENTATION *Normal	ORIENTATION Invert			

① Substituted Address Layout menu selections when ORIENTATION is in **Invert**.

①Address Layout A. Dist to Right	DIST TO RIGHT +MORE *4.50 in -LESS	DIST TO RIGHT +MORE *115 mm -LESS	

----MAIN MENU---- **2. Print Quality**	Print Quality *Executive	Print Quality Letter	Print Quality Draft	Print Quality Super Draft	

----MAIN MENU---- **3. Font**	FONT ②**A. Name**	FONT NAME *Courier	FONT NAME Sans Serif	FONT NAME Roman	FONT NAME Baxter	FONT NAME Dingbat
		FONT NAME Hancock	FONT NAME Marina	FONT NAME Quincy	FONT NAME Silicon	FONT NAME Springer
		FONT NAME Stencil	FONT NAME Windmill			
	FONT **B. Size**	FONT SIZE +LARGER *12 point -SMALLER				
	FONT **C. Width**	FONT WIDTH *Normal (100%)	FONT WIDTH Thin (75%)	FONT WIDTH Condensed (50%)	FONT WIDTH Wide (125%)	FONT WIDTH Expanded (150%)
	FONT **D. Bold**	BOLD *Off	BOLD On			
	FONT **E. Italic**	ITALIC *Off	ITALIC On			
	FONT **F. Outline**	OUTLINE *Off	OUTLINE On			

----MAIN MENU---- **4. Barcode**	BARCODE **A. Location**	BARCODE LOCATION *Off	BARCODE LOCATION Above Address	BARCODE LOCATION Below Address
	BARCODE **B. 5 Digit On/Off**	5 DIGIT BARCODE *Off	5 DIGIT BARCODE On	
	BARCODE **C. Bar Width**	Bar Width +MORE *10 dots -LESS		

② To print a list of accessible fonts in their typeface, press the Test button when in the **FONT** menu and the selection **A. Name** is displayed.

Appendix A • Bryce Office Systems 30K **MAIN MENU** Flow Chart

----MAIN MENU---- **5.Address Recovery**	ADDRESS RECOVERY **A. Get Address**	02: John P. Jones Hit Recover ENTER to	NONE TO RECOVER.
	ADDRESS RECOVERY **B. Clear Memory**	Clear the +YES Address Buffer? -NO	

----MAIN MENU---- **6. Clear Counter**	Clear address +YES (pcs) counter? -NO	Address counter cleared. Pieces=0

----MAIN MENU---- **7. Job Settings**	JOB SETTINGS **A. Load**	Load Settings +MORE from Job #3? -LESS	Printer is set for Job #3.
	JOB SETTINGS **B. Save**	Save Settings +MORE as Job #6? -LESS	Job #6 has been saved.

----MAIN MENU---- **8. Conveyer time**	CONVEYER TIME + MORE *0.00 Seconds - LESS

----MAIN MENU---- **9. Image Overlay**	IMAGE OVERLAY A.**First Image Overlay**	FIRST IMAGE OVERLAY Enable	FIRST IMAGE OVERLAY Exit
	IMAGE OVERLAY **B.Clear Overlay**	CLEAR OVERLAY Clear	CLEAR OVERLAY Exit
	IMAGE OVERLAY **C.Print Overlay First**	PRINT OVERLAY FIRST *Enable	PRINT OVERLAY FIRST Disable

----MAIN MENU---- **10. Purge Print Head**	Purge print + YES Head? - NO

----MAIN MENU---- **11. Ink Count**	Enter for 100% +NEXT Hd01=100% Full -PREV	Enter for 100% +NEXT Hd02=100% Full -PREV	Enter for 100% +NEXT Hd03=100% Full -PREV
	Enter for 100% +NEXT Hd04=100% Full -PREV	Enter for 100% +NEXT Hd05=100% Full -PREV	Enter for 100% +NEXT Hd06=100% Full -PREV

----SETUP MENU----	STOP ON FEED ERROR	STOP ON FEED ERROR
1.Stop on Feed Err	* On	Off

----SETUP MENU----	FEEDER SIGNAL		
2.Feeder Signal	**.*NONE**		
	FEEDER SIGNAL **ON/OFF CONTROL**		
	FEEDER SIGNAL **PULSE OFF SIGNAL**		
	FEEDER SIGNAL **ON/QUICK OFF**		
	FEEDER SIGNAL **SIGNAL POLARITY**	SIGNAL POLARITY *Active OFF	SIGNAL POLARITY Active ON

----SETUP MENU----	LINES/ADDRESS+MORE
3.Lines Per Address	*66 -LESS

----SETUP MENU----	LINE TERMINATION	LINE TERMINATION	LINE TERMINATION	LINE TERMINATION
4.Line Termination	*CR=CR, LF=LF	CR=CR+LF LF=LF	CR=CR LF=CR,LF	CR=CR+LF LF=CR+LF

----SETUP MENU----	HEX DUMP MODE	HEX DUMP MODE
5.Hex Dump Mode	*Off	On

----SETUP MENU----	LANGUAGE **A. Symbol Set**	ISO CHARACTER SET *ISO 6 ANSI ASCII	ISO CHARACTER SET ISO 69 FRENCH	ISO CHARACTER SET ISO 21 GERMAN	ISO CHARACTER SET ISO 4 UK	ISO CHARACTER SET ISO 60 NORW / DAN	ISO CHARACTER SET ISO 11 SWED / FIN
6.Language		ISO CHARACTER SET ISO 15 ITALIAN	ISO CHARACTER SET ISO 17 SPANISH	ISO CHARACTER SET ISO 61 NOR / DAN	ISO CHARACTER SET ISO 10 SWED / FIN	ISO CHARACTER SET ISO 16 PORTUGUESE	ISO CHARACTER SET ISO 8859
		ISO CHARACTER SET ROMAN 8	ISO CHARACTER SET WINDOWS LATIN 1	ISO CHARACTER SET PC 8	ISO CHARACTER SET CP 1250		
	LANGUAGE **B. Inch/Millimeter**	MEASUREMENT UNITS *Inch	MEASUREMENT UNITS Millimeter				
	LANGUAGE **C. Menu Language**	DISPLAY LANGUAGE *English	DISPLAY LANGUAGE German	DISPLAY LANGUAGE French	DISPLAY LANGUAGE Italian	DISPLAY LANGUAGE Spanish	DISPLAY LANGUAGE Dutch
		DISPLAY LANGUAGE Polish	DISPLAY LANGUAGE Japanese				

----SETUP MENU----	BELT SPEED +
7.Transport Speed	*100% of maximum -

③ Select one of the ASCII characters 33 to 90 to use for the Postal Bundle Break. The selected ASCII character is displayed with a * next to the character contained in the braces.

----SETUP MENU----	POSTAL BUNDLE BREAK	ENABLE/DISABLE BREAK	ENABLE/DISABLE BREAK
8.Postal Bundle Brk	**Enable/Disable Break**	*Off	On

POSTAL BUNDLE BREAK	BREAK CHAR +NEXT	
③**Break Character**	*{*} -PREV	
POSTAL BUNDLE BREAK	CHAR COUNT +MORE	
Break Char Count	*06 -LESS	
POSTAL BUNDLE BREAK	PAUSE TIME +MORE	
Pause Time	*4.00 Seconds -LESS	

----SETUP MENU----	PURGE AT START	PURGE AT START
9.Pre-Purge	*Disable	Enable

PERIODIC PURGE	PERIODIC PURGE	
*Disable	Enable	
PURGE INTERVAL +MORE		
*120 Seconds -LESS		
NOZZLE KEEP ALIVE	NOZZLE KEEP ALIVE	
*Disable	Enable	

----SETUP MENU----	FEED GAP
10.Feed Gap	Stream Feeding

FEED GAP	FEED GAP +MORE		FEED GAP +MORE	
*Selectable Gap	*4.50 in -LESS		*300 mm -LESS	

----SETUP MENU----	ROM REV = P72693 ④
11.ROM Revision #	MAINTCOUNT=12345678

----SETUP MENU----	Print Head Size	Print Head Size
12.Print Head Size	*Normal Capacity	Extended Capacity

③ Select one of the ASCII characters 33 to 90 to use for the Postal Bundle Break. The selected ASCII character is displayed with a * next to the character contained in the braces.

④ To print a list of the Main Menu, Setup Menu and Service Menu settings, press the Test button when **ROM REV** is displayed.

---SERVICE MENU---	BANK A	MOVE HD 2 VERT +UP
1. Adjust Print	Head 2 up down	*294 press test -DOWN
	BANK A Head 3 up down	MOVE HD 3 VERT +UP *294 press test -DOWN
	BANK B Head 5 up down	MOVE HD 5 VERT +UP *294 press test -DOWN
	BANK B Head 6 up down	MOVE HD 6 VERT +UP *294 press test -DOWN
	BANK A Head 2 side to side	MOVE HD 2 <-> +LEFT *50 press test -RIGHT
	BANK A Head 3 side to side	MOVE HD 3 <-> +LEFT *50 press test -RIGHT
	BANK B Head 5 side to side	MOVE HD 5 <-> +LEFT *50 press test -RIGHT
	BANK B Head 6 side to side	MOVE HD 6 <-> +LEFT *50 press test -RIGHT
	MOVE BANK A <-> +LEFT * 01.000″ test -RGHT	
	MOVE BANK B <-> +LEFT * 07.500″ test -RGHT	

---SERVICE MENU---	debug *BELT 00 ips
2. Test System	p F FEEDER 00 ips

---SERVICE MENU---	abcdefghijklmnopqrst	scrolls for 3
3. Test Display	ABCDEFGHIJKLMNOPQRST	seconds then stops

HEX CHART

		MSB							
DECIMAL		0	16	32	48	64	80	96	112
	HEX	0	1	2	3	4	5	6	7
0	0	NUL	DLE	SP	0	@	P	`	p
1	1	SOH	DC1	!	1	A	Q	a	q
2	2	STX	DC2	"	2	B	R	b	r
3	3	ETX	DC3	#	3	C	S	c	s
4	4	EOT	DC4	$	4	D	T	d	t
LSB 5	5	ENQ	NAK	%	5	E	U	e	u
6	6	ACK	SYN	&	6	F	V	f	v
7	7	BEL	ETB	'	7	G	W	g	w
8	8	BS	CAN	(	8	H	X	h	x
9	9	HT	EM	)	9	I	Y	i	y
10	A	LF	SUB	*	:	J	Z	j	z
11	B	VT	ESC	+	;	K	[	k	{
12	C	FF	FS	,	<	L	\	l	|
13	D	CR	GS	-	=	M	]	m	}
14	E	SO	RS	.	>	N	^	n	~
15	F	SI	US	/	?	O	_	o	DEL

HEX CHART

Example: The capital letter A is a HEX 41. Find the letter A on the above chart, and look towards the top of the chart (MSB) and the locate the HEX number 4. Then look to the left side of the chart (LSB) and locate the Hex number 1. Therefore the HEX number is MSB 4 and LSB 1= 41.

Introduction

The 30K Address Printer emulates the listed PCL 5 printer command codes. The 30K Address Printer will virtually handle media as an HP1200 would using these printer commands. Additional printer commands have been added to allow control of special printer addressing functions and addressing needs.

The printer command codes are sets of characters that allow your computer software to override the Industrial Printer menu selections as fonts, print quality, etc. so customized address formats can be created.

PCL Command Codes

Code Name	Symbol	HEX Value	DEC Value	Description
Line Feed	<LF>	0A	10	Causes the printer to advance the paper one line at current line spacing.
Form Feed	<FF>	0C	12	Causes the printer to advance the paper to the next top of form.
Carriage Return	<CR>	0D	13	Causes the printer to move the current print position to the left margin. Does not cause a paper advance.
Escape	<←>	1B	27	Indicates to the printer that the characters immediately following are part of a printer command.
Space	<SP>	20	32	Causes the printer to move the current print position one character to the right.

Note: The order that PCL Commands are received can affect the performance of the printer. PCL commands sent in the wrong order may produce erratic and unanticipated results. The following is a quick guideline for what order to send the PCL commands. For more explicit details see a PCL 5 Printer Language Technical Reference Manual.

To setup a page using PCL commands the expected order is:

1. Reset (Esc E)
2. Page Orientation
3. Definition of a Page Size
4. Margins on the page
5. Definitions of a Font
    a. Select a font
    b. Set the Font Height
    c. Set the Font Pitch
6. Set the positioning commands

PCL parameterized escape sequences

Printer Feature	Printer Command	HEX Equivalent	DEC Equivalent	Description
Initialization				
Reset	←E	1B 45	027 069	Defines reset conditions
Hard Reset	←H	1B 48	027 072	Performs reset plus clears all permanent macros, fonts, and address recovery buffer
Page Control				
Page Size Default	←&l0A	1B 26 6C 30 41	027 038 108 048 065	#10 Envelope values
Page Size Executive	←&l1A	1B 26 6C 31 41	027 038 108 049 065	7.25 x 10.5 inches (18.3 x 26.7 cm)
Page Size Letter	←&l2A	1B 26 6C 32 41	027 038 108 050 065	8.5 x 11 inches (21.6 x 27.9 cm)
Page Size Legal	←&l3A	1B 26 6C 33 41	027 038 108 051 065	8.5 x 14 inches (21.6 x 35.6)
Page Size A4	←&l26A	1B 26 6C 32 36 41	027 038 108 050 054 065	210 x 297 mm
Page Size Mon Env	←&l80A	1B 26 6C 38 30 41	027 038 108 056 048 065	7.5 x 3.88 inches (19.1 x 9.9 cm)
Page Size #10 Env	←&l81A	1B 26 6C 38 31 41	027 038 108 056 049 065	9.5 x 4.1 inches (24.1 x 10.4 cm)
Page Size DL Env	←&l90A	1B 26 6C 39 30 41	027 038 108 057 048 065	220 x 110 mm
Page Size C5 Env	←&l91A	1B 26 6C 39 31 41	027 038 108 057 049 065	229 x 162 mm
Page Size B5 Env	←&l100A	1B 26 6C 31 30 30 41	027 038 108 049 048 048 065	238 x 104 mm
Page Size 9.4” x 15”	←&l101A	1B 26 6C 31 30 31 41	027 038 108 049 048 049 065	9.4 x 15 inches (23.9 x 38.1 cm)
Left Margin	←&a#L	1B 26 61 #..# 4C	027 038 097 #..# 076	# of Columns. Defined by current HMI.
Clear Horiz Margins	←9	1B 39	027 057	
Top Margin	←&l#E	1B 26 6C #..# 45	027 038 108 #..# 069	# of Dots from origin
Page Length ①	←&l#P	1B 26 6C #..# 50	027 038 108 #..# 080	# of Lines
Text Length	←&l#F	1B 26 6C #..# 46	027 038 108 #..# 070	# of Lines
Horiz Motion Index (HMI)	←&k#H	1B 26 6B #..# 48	027 038 107 #..# 072	# of 1/120 inch (1/47 cm)

PCL parameterized escape sequences

Printer Feature	Printer Command	HEX Equivalent	DEC Equivalent	Description
Page Control				
Vertical Motion Index (VMI)	←&l#C	1B 26 6C #..# 43	027 038 108 #..# 067	# of 1/48 inch (1/19 cm)
Line Spacing	←&l#D	1B 26 6C #..# 44	027 038 108 #..# 068	# of lines per inch
Page Eject	←&l0H	1B 26 6C 30 48	027 038 108 048 072	
Heavy Media Mode OFF	←&l6H	1B 26 6C 36 48	027 038 108 054 072	Effects feed mode selection
Heavy Media Mode ON	←&l9H	1B 26 6C 39 48	027 038 108 057 072	Effects feed mode selection
Page Orientation	←&l0O	1B 26 6C 30 4F	027 038 108 048 079	Portrait
	←&l2O	1B 26 6C 32 4F	027 038 108 050 079	Reverse Portrait
Dry Hold Time	←&b#T	1B 26 62 #..# 54	027 038 098 #..# 084	Minimum time between pieces in 1/10 seconds. Specifies time from leading edge to leading edge. Dflt = 0. Max. = 300
Page Height	←+s#H	1B 2B 73 #..# 48	027 043 115 #..# 072	# = height in PCL units. (1/300 in.) (1/118 cm) Range of values is 1050 ... 4500 (3 to 15 in.) (7.62 to 38.1 cm).
Page Width ①	←+s#W	1B 2B 73 #..# 57	027 043 115 #..# 087	# = width in PCL units (1/300 in.) (1/118 cm) Range of values is 1500 .. 2820 (5 to 9.4 in.) (12.7 to 23.9 cm).
OS Determination				
Character Set Mangling OS	←+w0A	1B 2B 77 30 41	027 043 119 048 65	Disables Barcode options that use "~~", "~&" and "~#". The Address Recovery display is also disabled.
OS uses Normal Character Set	←+w1A	1B 2B 77 31 41	027 043 119 049 65	Literal processing of data.
Cursor Positioning				
Horizontal Position	←&a#C	1B 26 61 #..# 43	027 038 097 #..# 067	Move to Column no.
	←*p#X	1B 2A 70 #..# 58	027 042 112 #..# 088	# of Dots
	←&a#H	1B 26 61 #..# 48	027 038 097 #..# 072	# of Decipoints (1/720 inch) (1/283 cm)
Vertical Position	←&a#R	1B 26 61 #..# 52	027 038 097 #..# 082	Move to Row no.
	←*p#Y	1B 2A 70 #..# 59	027 042 112 #..# 089	# of Dots
	←&a#V	1B 26 61 #..# 56	027 038 097 #..# 086	# of Decipoints (1/720 inch) (1/283 cm)

PCL parameterized escape sequences

Printer Feature	Printer Command	HEX Equivalent	DEC Equivalent	Description
Half Line Feed	←=	1B 3D	027 061	Half of current VMI
Line Termination	←&k#G			
	0	1B 26 6B 30 47	027 038 107 048 071	CR=CR, LF=LF, FF=FF
	1	1B 26 6B 31 47	027 038 107 049 071	CR=CR+LF, LF=LF, FF=FF
	2	1B 26 6B 32 47	027 038 107 050 071	CR=CR, LF=CR+LF, FF=CR+FF
	3	1B 26 6B 33 47	027 038 107 051 071	CR=CR+LF, LF=CR+LF, FF=CR+FF
Font Selection (Primary)				
Symbol Set	←(ID	1B 28 # .. #	027 040 # .. #	
	←(0D	1B 28 30 44	027 040 048 068	ISO 60 Norwegian ver 1
	←(0I	1B 28 30 49	027 040 048 073	ISO 15 Italian
	←(0N	1B 28 30 4E	027 040 048 078	ISO 8859
	←(0S	1B 28 30 53	027 040 048 083	ISO 11 Swedish
	←(0U	1B 28 30 55	027 040 048 085	ANSI ASCII
	←(1D	1B 28 31 44	027 040 049 068	ISO 61 Norwegian ver 2
	←(1E	1B 28 31 45	027 040 049 069	ISO 4 UK
	←(1F	1B 28 31 46	027 040 049 070	ISO 69 French
	←(1G	1B 28 31 47	027 040 049 071	ISO 21 German
	←(2S	1B 28 32 53	027 040 050 083	ISO 17 Spanish
	←(3S	1B 28 33 53	027 040 051 083	ISO 10 Swedish
	←(4S	1B 28 34 53	027 040 052 083	ISO 16 Portuguese
	←(8U	1B 28 38 55	027 040 056 085	Roman 8
	←(10U	1B 28 31 30 55	027 040 049 048 085	PC - 8
	←(12U	1B 28 31 32 55	027 040 049 050 085	PC 850
	←(19U	1B 28 31 39 55	027 040 049 057 085	Windows 3.1 Latin
Print Quality	←(s#Q			
	←(s0Q	1B 28 73 30 51	027 040 115 048 081	Quality = Draft
	←(s1Q	1B 28 73 31 51	027 040 115 049 081	Quality = Letter
	←(s2Q	1B 28 73 32 51	027 040 115 050 081	Quality = Executive
	←(s4Q	1B 28 73 34 51	027 040 115 052 081	Quality = Super Draft
Spacing ⑥	←(s#P			
	0	1B 28 73 30 50	027 040 115 048 080	Fixed Spacing
	1	1B 28 73 31 50	027 040 115 049 080	Proportional Spacing
Height	←(s#V	1B 28 73 #..# 56	027 040 115 #..# 086	Point Size #/72 inch (1/28 cm)
Font Selection (Primary)				
Style	←(s#S			

PCL parameterized escape sequences

Printer Feature	Printer Command	HEX Equivalent	DEC Equivalent	Description
	0	1B 28 73 30 53	027 040 115 048 083	Upright
	1	1B 28 73 31 53	027 040 115 049 083	Italic
	2	1B 28 73 32 53	027 040 115 050 083	Expanded (150%)
	3	1B 28 73 33 53	027 040 115 051 083	Italic, Expanded (150%)
	4	1B 28 73 34 53	027 040 115 052 083	Thin (75%)
	5	1B 28 73 35 53	027 040 115 053 083	Italic, Thin (75%)
	8	1B 28 73 38 53	027 040 115 056 083	Condensed (50%)
	9	1B 28 73 39 53	027 040 115 057 083	Italic, Condensed (50%)
	16	1B 28 73 31 36 53	027 040 115 049 054 083	Wide (125%)
	17	1B 28 73 31 37 53	027 040 115 049 055 083	Italic, Wide (125%)
	32	1B 28 73 33 32 53	027 040 115 051 050 083	Hollow
	33	1B 28 73 33 33 53	027 040 115 051 051 083	Hollow, Italic
	34	1B 28 73 33 34 53	027 040 115 051 052 083	Hollow, Expanded (150%)
	35	1B 28 73 33 35 53	027 040 115 051 053 083	Hollow, Italic, Expanded (150%)
	36	1B 28 73 33 36 53	027 040 115 051 054 083	Hollow, Thin (75%)
	37	1B 28 73 33 37 53	027 040 115 051 055 083	Hollow, Italic, Thin (75%)
	40	1B 28 73 34 30 53	027 040 115 052 048 083	Hollow, Condensed (50%)
	41	1B 28 73 34 31 53	027 040 115 052 049 083	Hollow, Italic, Condensed (50%)
	48	1B 28 73 34 38 53	027 040 115 052 056 083	Hollow, Wide (125%)
	49	1B 28 73 34 39 53	027 040 115 052 057 083	Hollow, Italic, Wide (125%)
Stroke Weight	←(s#B			
	0	1B 28 73 30 42	027 040 115 048 066	Normal
	3	1B 28 73 33 42	027 040 115 051 066	Bold

PCL parameterized escape sequences

Printer Feature	Printer Command	HEX Equivalent	DEC Equivalent	Description
Font Selection (Primary)				
Typeface	←(s#T			
	3	1B 28 73 33 54	027 040 115 051 084	Courier
	4	1B 28 73 34 54	027 040 115 052 084	San Serif
	5	1B 28 73 35 54	027 040 115 053 084	Roman
	61440	1B 28 73 36 31 34 34 30 54	027 040 115 054 049 052 052 048 084	External (First)
	61441	1B 28 73 36 31 34 34 31 54	027 040 115 054 049 052 052 049 084	External (Second) If available
Font Selection				
Font Selection	←(#X	1B 28 #..# 58	027 040 #..# 088	Font ID # from download
Font Selection (Secondary)				
Symbol Set	←)ID	1B 29 # .. #	027 041 # .. #	
	←)0D	1B 29 30 44	027 041 048 068	ISO 60 Norwegian ver 1
	←)0I	1B 29 30 49	027 041 048 073	ISO 15 Italian
	←)0N	1B 29 30 4E	027 041 048 078	ISO 8859
	←)0S	1B 29 30 53	027 041 048 083	ISO 11 Swedish
	←)0U	1B 29 30 55	027 041 048 085	ANSI ASCII
	←)1D	1B 29 31 44	027 041 049 068	ISO 61 Norwegian ver 2
	←)1E	1B 29 31 45	027 041 049 069	ISO 4 UK
	←)1F	1B 29 31 46	027 041 049 070	ISO 69 French
	←)1G	1B 29 31 47	027 041 049 071	ISO 21 German
	←)2S	1B 29 32 53	027 041 050 083	ISO 17 Spanish
	←)3S	1B 29 33 53	027 041 051 083	ISO 10 Swedish
	←)4S	1B 29 34 53	027 041 052 083	ISO 16 Portuguese
	←)8U	1B 29 38 55	027 041 056 085	Roman 8
	←)10U	1B 29 31 30 55	027 041 049 048 085	PC - 8
	←)12U	1B 29 31 32 55	027 041 049 050 085	PC 850
	←)19U	1B 29 31 39 55	027 041 049 057 085	Windows 3.1 Latin
Print Quality	←)s#Q			
	←)s0Q	1B 29 73 30 51	027 041 115 048 081	Quality = Draft
	←)s1Q	1B 29 73 31 51	027 041 115 049 081	Quality = Letter
	←)s2Q	1B 29 73 32 51	027 041 115 050 081	Quality = Executive
Spacing ⑥	←)s#P			
	0	1B 29 73 30 50	027 041 115 048 080	Fixed Spacing
	1	1B 29 73 31 50	027 041 115 049 080	Proportional Spacing

PCL parameterized escape sequences

Printer Feature	Printer Command	HEX Equivalent	DEC Equivalent	Description
Font Selection (Secondary)				
Height	←)s#V	1B 29 73 #..# 56	027 041 115 #..# 086	Point Size #/72 inch (1/28 cm)
Style	←)s#S			
	0	1B 29 73 30 53	027 041 115 048 083	Upright
	1	1B 29 73 31 53	027 041 115 049 083	Italic
	2	1B 29 73 32 53	027 041 115 050 083	Expanded (150%)
	3	1B 29 73 33 53	027 041 115 051 083	Italic, Expanded (150%)
	4	1B 29 73 34 53	027 041 115 052 083	Thin (75%)
	5	1B 29 73 35 53	027 041 115 053 083	Italic, Thin (75%)
	8	1B 29 73 38 53	027 041 115 056 083	Condensed (50%)
	9	1B 29 73 39 53	027 041 115 057 083	Italic, Condensed (50%)
	16	1B 29 73 31 36 53	027 041 115 049 054 083	Wide (125%)
	17	1B 29 73 31 37 53	027 041 115 049 055 083	Italic, Wide (125%)
	32	1B 29 73 33 32 53	027 041 115 051 050 083	Hollow
	33	1B 29 73 33 33 53	027 041 115 051 051 083	Hollow, Italic
	34	1B 29 73 33 34 53	027 041 115 051 052 083	Hollow, Expanded (150%)
	35	1B 29 73 33 35 53	027 041 115 051 053 083	Hollow, Italic, Expanded (150%)
	36	1B 29 73 33 36 53	027 041 115 051 054 083	Hollow, Thin (75%)
	37	1B 29 73 33 37 53	027 041 115 051 055 083	Hollow, Italic, Thin (75%)
	40	1B 29 73 34 30 53	027 041 115 052 048 083	Hollow, Condensed (50%)
	41	1B 29 73 34 31 53	027 041 115 052 049 083	Hollow, Italic, Condensed (50%)
	48	1B 29 73 34 38 53	027 041 115 052 056 083	Hollow, Wide (125%)
	49	1B 29 73 34 39 53	027 041 115 052 057 083	Hollow, Italic, Wide (125%)
Stroke Weight	←)s#B			
	0	1B 29 73 30 42	027 041 115 048 066	Normal
	3	1B 29 73 33 42	027 041 115 051 066	Bold

PCL parameterized escape sequences

Printer Feature	Printer Command	HEX Equivalent	DEC Equivalent	Description
Font Selection (Secondary)				
Typeface	←)s#T			
	3	1B 29 73 33 54	027 041 115 051 084	Courier
	4	1B 29 73 34 54	027 041 115 052 084	San Serif
	5	1B 29 73 35 54	027 041 115 053 084	Roman
	61440	1B 29 73 36 31 34 34 30 54	027 041 115 054 049 052 052 048 084	External (First)
	61441	1B 29 73 36 31 34 34 31 54	027 041 115 054 049 052 052 049 084	External (Second) If available
Underline				
Underline	←&d#D			
Underline On	0	1B 26 64 30 44	027 038 100 48 068	
Underline On	3	1B 26 64 33 44	027 038 100 51 068	
Underline Off	←&d@	1B 26 64 40	027 038 100 064	
Macros ②				
Macro ID	←&f#Y	1B 26 66 #..# 59	027 038 102 #..# 089	# is macro ID
Macro Control	←&f#X			
	0	1B 26 66 30 58	027 038 102 048 088	Start macro definition (last ID specified)
	1	1B 26 66 31 58	027 038 102 049 088	Stop macro definition
	2	1B 26 66 32 58	027 038 102 050 088	Execute Macro (last ID specified). Use current modified print environment. Changes retained on completion
	3	1B 26 66 33 58	027 038 102 051 088	Call Macro (last ID specified). Use current modified print environment. Restore prior environment on completion.
	4	1B 26 66 34 58	027 038 102 052 088	Enable macro for auto overlay (last ID specified)
	5	1B 26 66 35 58	027 038 102 053 088	Disable auto overlay
	6	1B 26 66 36 58	027 038 102 054 088	Delete all Macros
	7	1B 26 66 37 58	027 038 102 055 088	Delete all temp macros
	8	1B 26 66 38 58	027 038 102 056 088	Delete Macro (last ID specified)
	9	1B 26 66 39 58	027 038 102 057 088	Make macro temp (last ID specified)

PCL parameterized escape sequences

Printer Feature	Printer Command	HEX Equivalent	DEC Equivalent	Description
	10	1B 26 66 31 30 58	027 038 102 049 048 088	Make macro perm (last ID specified)
Programming				
Hex Dump Mode ON	←Y	1B 59	027 089	Data printed as hex numbers, ESC and Control codes not executed.
Hex Dump Mode OFF	←Z	1B 5A	027 090	
Font Management				
Assign Font ID #	←*c#D	1B 2A 63 #..# 44	027 042 099 #..# 068	# is Font ID
Font Control	←*c#F			
	0	1B 2A 63 30 46	027 042 099 048 070	Delete all Fonts
	1	1B 2A 63 31 46	027 042 099 049 070	Delete temp fonts
	2	1B 2A 63 32 46	027 042 099 050 070	Delete last font
	3	1B 2A 63 33 46	027 042 099 051 070	Delete Character
	4	1B 2A 63 34 46	027 042 099 052 070	Make font temp
	5	1B 2A 63 35 46	027 042 099 053 070	Make font permanent
Soft Font Creation ③				
Font Descriptor	←)s#W [data]	1B 29 73 #..# 57 data	027 041 115 #..# 087 data	Laser Jet soft fonts are supported. These fonts always have a 64 byte descriptor. Desk Jet fonts are not supported.
Character Code	←*c#E	1B 2A 63 #..# 45	027 042 099 #..# 069	ASCII code no.
Download Character	←(s#W [data]	1B 28 73 #..# 57 data	027 040 115 #..# 087 data	
Raster Graphics				
Raster Graphics Compression	←*b#M			
	0	1B 2A 62 30 4D	027 042 098 048 077	Uncompressed format
	2	1B 2A 62 32 4D	027 042 098 050 077	TIFF format
	3	1B 2A 62 33 4D	027 042 098 051 077	Delta Row compression
	4	1B 2A 62 34 4D	027 042 098 052 077	Reserved
Transfer graphics by plane	←*b #V	1B 2A 62 # 56 [data]	027 042 098 # 086 [data]	
Transfer Raster Graphics data	←*b#W [data]	1B 2A 62 #..# 57 [data]	027 042 098 #..# 087 [data]	Number of bytes
Raster Y Offset	←*b #Y [data]	1B 2A 62 #..# 59 [data]	027 042 098 #..# 089 [data]	Number of dots

PCL parameterized escape sequences

Printer Feature	Printer Command	HEX Equivalent	DEC Equivalent	Description
Start Raster Graphics	←*r#A			
	0	1B 2A 72 30 41	027 042 114 048 065	Place to left most position
	1	1B 2A 72 31 41	027 042 114 049 065	Place at current position
End Raster Graphics				
	←*rB	1B 2A 72 42	027 042 114 066	
	←*rC	1B 2A 72 43	027 042 114 067	Resets left margin to 0
Set Raster Graphics Width	←*r#S	1B 2A 72 #..# 53	027 042 114 #..# 083	Set number of pixels
Set Raster Graphics Height	←*r#T	1B 2A 72 # 54	027 042 114 # 084	Height is raster rows
Simple Color	←*r#U			
Black pallet	1	1B 2A 72 31 55	027 042 114 049 085	1 plane
Raster Graphics Resolution	←*t#R			
	75	1B 2A 72 37 35 52	027 042 116 055 055 082	75 dots per inch
	150	1B 2A 72 31 35 30 52	027 042 116 049 053 048 082	150 dots per inch
	300	1B 2A 72 33 30 30 52	027 042 116 051 048 048 082	300 dots per inch

① The Page Width & Page Length printer commands function like the Page Size command. Using these commands automatically enables Page Eject and disables overlay macros. Both the Page Width and Page Length commands can be used independently and will only change the width or length to the maximum allowable page size of 9.4 x 15 inches (23.9 x 38.1 cm). Setting the cursor positioning commands, margin settings, print data, etc. to cause printing beyond the pages size dimensions will be cropped.

② Only one overlay macro can be used at a time, and cannot be recursive. The overlay macros need print quality, page parameters, etc. to determine the printers' page setup.

③ Soft font creation is in HP non compressed Bit Map Font Format.

⑥ The resident fonts are scaleable from 8 to 30 points. If a desired font spacing does not match the font selected an internal font will be substituted. For fixed spacing the substitute font will be Courier, and Sans Serif for proportionally spaced fonts. Characteristics of the font being replaced, such as point size, print width, etc., will be matched by the substituted font.

To determine page size or cursor movement in Dots multiply by 300 Dots /inch (2.54 cm) for Horizontal and 300 Dots /inch (2.54 cm) for Vertical. Example: a Letter size page of 8.5 x 11 inches (21.6 x 27.9 cm) is 2550 x 3300 Dots

PCL parameterized escape sequences

To utilize the 30K Address Printers internal bar-coding features, records are searched for a valid ZIP, ZIP + 4, Delivery Point Bar Code (DPBC) or DPBC with a check sum. For ZIP + 4 or a 11 digit DPBC, a checksum is computed for printing a USPS Postnet bar-code with framing bars. The position of the Postnet bar-code is determined by the printers menu setup or the bar-code location commands in effect. Bar-codes will not be printed outside of the printers' Page Size setup.

Printer Feature	**Printer Command**	**HEX Equivalent**	**DEC Equivalent**	**Description**
Bar Code				
Non - address data markers ④	←+b#A			Marks data that is not part of destination address.
	1	1B 2B 62 31 41	027 043 098 49 065	marks the end of non-address data
	2	1B 2B 62 32 41	027 043 098 50 065	marks the beginning of the non-address data.
5 Digit Bar Codes	←+b#D			
	0	1B 2B 62 30 44	027 043 098 048 068	Don't print 5 Digit Bar Codes
	1	1B 2B 62 31 44	027 043 098 049 068	Print all Bar Codes for zip, zip + 4, and DPBC.
Bar Code	←+b#E			
	0	1B 2B 62 30 45	027 043 098 048 069	Disable Bar Code
	1	1B 2B 62 31 45	027 043 098 049 069	Enable Bar Code
Bar Code - Horizontal	←+b#H	1B 2B 62 #..# 48	027 043 098 #..# 072	# of Decipoints (1/720 inch) (1/283 cm)
Bar Code Placement	←+b#P	1B 2B 62 #..# 50	027 043 098 #..# 080	Distance in 1/10 inch (1/4 cm) units from right edge of media. Value of 0 indicates edge of media
	0	1B 2B 62 30 50	027 043 098 048 080	Bar Code in lower right (default position)
	1	1B 2B 62 31 50	027 043 098 049 080	Bar Code above address
	2	1B 2B 62 32 50	027 043 098 050 080	Bar Code below address
⑦	3	1B 2B 62 33 50	027 043 098 051 080	Print Bar Code at specified horizontal & vertical position, otherwise print Bar Code in default position

PCL parameterized escape sequences

Printer Feature	Printer Command	HEX Equivalent	DEC Equivalent	Description
Bar Code				
Bar Code - Vertical	←+b#V	1B 2B 62 #..# 56	027 043 098 #..# 086	VMI # in Decipoints (1/720 inch) from bottom of page to bottom of bar-code
ZIP Code command Bar Code -⑤	←+b#Znnn	1B 2B 62 #..# 5A nnn	027 043 098 #..# 090 nnn	#= number of characters in the ZIP Code string. n = the ASCII representation of the ZIP code string.
	←+b5Z nnnnn	1B 2B 62 35 5A nnnnn	027 043 098 053 090 nnnnn	n = the ASCII representation of the ZIP code string. Must contain 5 digits.
	←+b9Z nnnnnnnnn	1B 2B 62 39 5A nnnnnnnnn	027 043 098 057 090 nnnnnnnnn	n = the ASCII representation of the ZIP code string. Must contain 9 digits.
	←+b11Z nnnnnnnnnn	1B 2B 62 31 31 5A nnnnnnnnnnn	027 043 098 49 49 090 nnnnnnnnnnn	n = the ASCII representation of the ZIP code string. Must contain 11 digits.
	←+b12Z nnnnnnnnnnn	1B 2B 62 31 32 5A nnnnnnnnnnnn	027 043 098 049 050 090 nnnnnnnnnnnn	n = the ASCII representation of the ZIP code string. Must contain 12 digits.

④ Use a pair of escape sequences, the first one before the data that is not part of the destination address such as return addresses, graphics, messages, etc. and the other to mark the end.

⑤ Use Zip Code command when two ZIP codes are being sent. The first ZIP code will be printed without a bar-code. The second ZIP code in the Zip Code command string will print a corresponding bar-code but not print the ZIP code. The Zip Code command only overrides the bar-code command for the present address.

⑦ Use the ←+b#H and ←+b#V commands to position the bar code. Measure the position from the right-hand corner of the leading edge of the media, not the upper left-hand corner.

30K CHARACTER SET

(Modeled after PC 850 Character Table)

0	16	<SP> 32	0 48	@ 64	P 80	` 96	p 112	Ç 128	É 144	á 160	▒ 176	└ 192	ð 208	Ó 224	- 240
1	17	! 33	1 49	A 65	Q 81	a 97	q 113	ü 129	æ 145	í 161	▒ 177	┴ 193	Ð 209	ß 225	± 241
2	18	" 34	2 50	B 66	R 82	b 98	r 114	é 130	Æ 146	ó 162	▓ 178	┬ 194	Ê 210	Ô 226	242
3	19	# 35	3 51	C 67	S 83	c 99	s 115	â 131	ô 147	ú 163	│ 179	├ 195	Ë 211	Ò 227	243
4	20	$ 36	4 52	D 68	T 84	d 100	t 116	ä 132	ö 148	ñ 164	┤ 180	─ 196	È 212	õ 228	¶ 244
5	21	% 37	5 53	E 69	U 85	e 101	u 117	à 133	ò 149	Ñ 165	Á 181	┼ 197	213	Õ 229	§ 245
6	22	& 38	6 54	F 70	V 86	f 102	v 118	å 134	û 150	ª 166	Â 182	ã 198	Í 214	µ 230	246
7	23	' 39	7 55	G 71	W 87	g 103	w 119	ç 135	ù 151	° 167	À 183	Ã 199	Î 215	Þ 231	¸ 247
8	24	(40	8 56	H 72	X 88	h 104	x 120	ê 136	ÿ 152	¿ 168	© 184	╚ 200	Ï 216	þ 232	º 248
9	25	) 41	9 57	I 73	Y 89	i 105	y 121	ë 137	Ö 153	® 169	╣ 185	╔ 201	┘ 217	Ú 233	¨ 249
<LF> 10	26	* 42	: 58	J 74	Z 90	j 106	z 122	è 138	Ü 154	170	║ 186	╩ 202	┌ 218	Û 234	• 250
11	<ESC> 27	+ 43	; 59	K 75	[91	k 107	{ 123	ï 139	ø 155	½ 171	╗ 187	╦ 203	█ 219	Ù 235	251
<FF> 12	28	, 44	< 60	L 76	\ 92	l 108	| 124	î 140	£ 156	172	╝ 188	╠ 204	▄ 220	236	252
<CR> 13	29	- 45	= 61	M 77	] 93	m 109	} 125	ì 141	Ø 157	¡ 173	¢ 189	═ 205	| 221	237	253
14	30	. 46	> 62	N 78	^ 94	n 110	~ 126	Ä 142	158	« 174	¥ 190	╬ 206	Ì 222	¯ 238	254
15	31	/ 47	? 63	O 79	_ 95	o 111	127	Å 143	ƒ 159	» 175	┐ 191	¤ 207	▀ 223	´ 239	™ 255

International Character Substitution

The following industry standard character substitution techniques are utilized:

ISO #	Character Set Name	ID #	35	36	64	91	92	93	94	96	123	124	125	126
6	ANSI ASCII	0U	#	$	@	[	\	]	^	`	{	|	}	~
69	French	1F	£	$	à	°	ç	§	^	µ	é	ù	è	¨
21	German	1G	#	$	§	Ä	Ö	Ü	^	`	ä	ö	ü	ß
4	United Kingdom	1E	£	$	@	[	\	]	^	`	{	|	}	¯
60	Norwegian/Danish	0D	#	$	@	Æ	Ø	Å	^	`	æ	ø	å	¯
11	Swedish/Finnish	0S	#	¤	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü
15	Italian	0I	£	$	§	°	ç	é	^	ù	à	ò	è	ì
17	Spanish	2S	£	$	§	¡	Ñ	¿	^	`	°	ñ	ç	~
61	Norwegian/Danish	1D	§	$	@	Æ	Ø	Å	^	`	æ	ø	å	|
16	Portuguese	4S	#	$	§	Ã	Ç	Õ	^	`	ã	ç	õ	°
10	Swedish	3S	#	¤	@	Ä	Ö	Å	^	`	ä	ö	å	¯

30K CHARACTER SET

(Modeled after 8859 Latin Character Table)

0	16	<SP> 32	0 48	@ 64	P 80	` 96	p 112	128	144	160	° 176	À 192	Ð 208	à 224	ð 240
1	17	! 33	1 49	A 65	Q 81	a 97	q 113	129	145	¡ 161	± 177	Á 193	Ñ 209	á 225	ñ 241
2	18	" 34	2 50	B 66	R 82	b 98	r 114	130	146	¢ 162	178	Â 194	Ò 210	â 226	ò 242
3	19	# 35	3 51	C 67	S 83	c 99	s 115	131	147	£ 163	179	Ã 195	Ó 211	ã 227	ó 243
4	20	$ 36	4 52	D 68	T 84	d 100	t 116	132	148	¤ 164	´ 180	Ä 196	Ô 212	ä 228	ô 244
5	21	% 37	5 53	E 69	U 85	e 101	u 117	133	149	¥ 165	µ 181	Å 197	Õ 213	å 229	õ 245
6	22	& 38	6 54	F 70	V 86	f 102	v 118	134	150	¦ 166	¶ 182	Æ 198	Ö 214	æ 230	ö 246
7	23	' 39	7 55	G 71	W 87	g 103	w 119	135	151	§ 167	• 183	Ç 199	215	ç 231	247
8	24	(40	8 56	H 72	X 88	h 104	x 120	136	152	¨ 168	¸ 184	È 200	Ø 216	è 232	ø 248
9	25	) 41	9 57	I 73	Y 89	i 105	y 121	137	153	© 169	185	É 201	Ù 217	é 233	ù 249
<LF> 10	26	* 42	: 58	J 74	Z 90	j 106	z 122	138	154	a 170	186	Ê 202	Ú 218	ê 234	ú 250
11	<ESC> 27	+ 43	; 59	K 75	[91	k 107	{ 123	139	155	« 171	» 187	Ë 203	Û 219	ë 235	û 251
<FF> 12	28	, 44	< 60	L 76	\ 92	l 108	| 124	140	156	172	188	Ì 204	Ü 220	ì 236	ü 252
<CR> 13	29	- 45	= 61	M 77	] 93	m 109	} 125	141	157	- 173	½ 189	Í 205	221	í 237	253
14	30	. 46	> 62	N 78	^ 94	n 110	~ 126	142	158	® 174	190	Î 206	Þ 222	î 238	þ 254
15	31	/ 47	? 63	O 79	_ 95	o 111	127	143	159	¯ 175	¿ 191	Ï 207	ß 223	ï 239	ÿ 255

The ID# for the ISO 8859 Character Set is (0N).

30K CHARACTER SET

(Modeled after Roman -8 Character Table)

0	16	<SP> 32	0 48	@ 64	**P** 80	` 96	**p** 112	128	144	160	¯ 176	â 192	Å 208	**Á** 224	þ 240
1	17	**!** 33	**1** 49	**A** 65	**Q** 81	**a** 97	**q** 113	129	145	**À** 161	177	ê 193	î 209	**Ã** 225	Þ 241
2	18	**"** 34	**2** 50	**B** 66	**R** 82	**b** 98	**r** 114	130	146	**Â** 162	178	ô 194	**Ø** 210	**ã** 226	· 242
3	19	**#** 35	**3** 51	**C** 67	**S** 83	**c** 99	**s** 115	131	147	**È** 163	º 179	û 195	**Æ** 211	**Đ** 227	µ 243
4	20	**$** 36	**4** 52	**D** 68	**T** 84	**d** 100	**t** 116	132	148	**Ê** 164	Ç 180	á 196	**å** 212	**ð** 228	¶ 244
5	21	**%** 37	**5** 53	**E** 69	**U** 85	**e** 101	**u** 117	133	149	**Ë** 165	**ç** 181	é 197	í 213	**Í** 229	245
6	22	**&** 38	**6** 54	**F** 70	**V** 86	**f** 102	**v** 118	134	150	Î 166	**Ñ** 182	**ó** 198	**ø** 214	**Í** 230	– 246
7	23	**'** 39	**7** 55	**G** 71	**W** 87	**g** 103	**w** 119	135	151	Ï 167	**ñ** 183	**ú** 199	**æ** 215	Ó 231	247
8	24	**(** 40	**8** 56	**H** 72	**X** 88	**h** 104	**x** 120	136	152	´ 168	¡ 184	à 200	**Ä** 216	Ò 232	½ 248
9	25	**)** 41	**9** 57	**I** 73	**Y** 89	**i** 105	**y** 121	137	153	169	¿ 185	è 201	ì 217	**Õ** 233	ª 249
<LF> 10	26	***** 42	**:** 58	**J** 74	**Z** 90	**j** 106	**z** 122	138	154	**^** 170	**¤** 186	ò 202	Ö 218	**õ** 234	º 250
11	<ESC> **27**	**+** 43	**;** 59	**K** 75	**[** 91	**k** 107	**{** 123	139	155	¨ 171	**£** 187	ù 203	Ü 219	**Š** 235	« 251
<FF> 12	28	**,** 44	**<** 60	**L** 76	**** 92	**l** 108	**|** 124	140	156	172	**¥** 188	ä 204	É 220	š 236	252
<CR> 13	29	**-** 45	**=** 61	**M** 77	**]** 93	**m** 109	**}** 125	141	157	**Ù** 173	§ 189	ë 205	**ï** 221	Ú 237	» 253
14	30	**.** 46	**>** 62	**N** 78	**^** 94	**n** 110	**~** 126	142	158	**Û** 174	*ƒ* 190	**ö** 206	**ß** 222	**Ÿ** 238	± 254
15	31	**/** 47	**?** 63	**O** 79	_ 95	**o** 111	127	143	159	**£** 175	¢ 191	**ü** 207	Ô 223	**ÿ** 239	255

The ID# for the Roman 8 Character Set is (8U).

30K CHARACTER SET

(Modeled after Windows 3.1 Latin Character Table)

0	16	<SP> 32	0 48	@ 64	P 80	` 96	p 112	128	144	160	° 176	À 192	Ð 208	à 224	ð 240
1	17	! 33	1 49	A 65	Q 81	a 97	q 113	129	145	¡ 161	± 177	Á 193	Ñ 209	á 225	ñ 241
2	18	" 34	2 50	B 66	R 82	b 98	r 114	, 130	146	¢ 162	178	Â 194	Ò 210	â 226	ò 242
3	19	# 35	3 51	C 67	S 83	c 99	s 115	ƒ 131	" 147	£ 163	179	Ã 195	Ó 211	ã 227	ó 243
4	20	$ 36	4 52	D 68	T 84	d 100	t 116	132	" 148	¤ 164	´ 180	Ä 196	Ô 212	ä 228	ô 244
5	21	% 37	5 53	E 69	U 85	e 101	u 117	133	• 149	¥ 165	µ 181	Å 197	Õ 213	å 229	õ 245
6	22	& 38	6 54	F 70	V 86	f 102	v 118	134	– 150	¦ 166	¶ 182	Æ 198	Ö 214	æ 230	ö 246
7	23	' 39	7 55	G 71	W 87	g 103	w 119	135	— 151	§ 167	· 183	Ç 199	215	ç 231	247
8	24	(40	8 56	H 72	X 88	h 104	x 120	^ 136	152	¨ 168	¸ 184	È 200	Ø 216	è 232	ø 248
9	25	) 41	9 57	I 73	Y 89	i 105	y 121	137	™ 153	© 169	185	É 201	Ù 217	é 233	ù 249
<LF> 10	26	* 42	: 58	J 74	Z 90	j 106	z 122	Š 138	š 154	ª 170	186	Ê 202	Ú 218	ê 234	ú 250
11	<ESC> 27	+ 43	; 59	K 75	[91	k 107	{ 123	139	155	« 171	» 187	Ë 203	Û 219	ë 235	û 251
<FF> 12	28	, 44	< 60	L 76	\ 92	l 108	| 124	140	156	172	188	Ì 204	Ü 220	ì 236	ü 252
<CR> 13	29	- 45	= 61	M 77	] 93	m 109	} 125	141	157	- 173	½ 189	Í 205	221	í 237	253
14	30	. 46	> 62	N 78	^ 94	n 110	~ 126	142	158	® 174	190	Î 206	Þ 222	î 238	þ 254
15	31	/ 47	? 63	O 79	_ 95	o 111	127	143	Ÿ 159	¯ 175	¿ 191	Ï 207	ß 223	ï 239	ÿ 255

The ID# for the Windows 3.1 Latin Character Set is (19U).
The Windows 3.1 Latin symbol set is recommended to use when running Microsoft Windows 3.1 / Windows 95.

30K CHARACTER SET

(Modeled after PC - 8 Character Table)

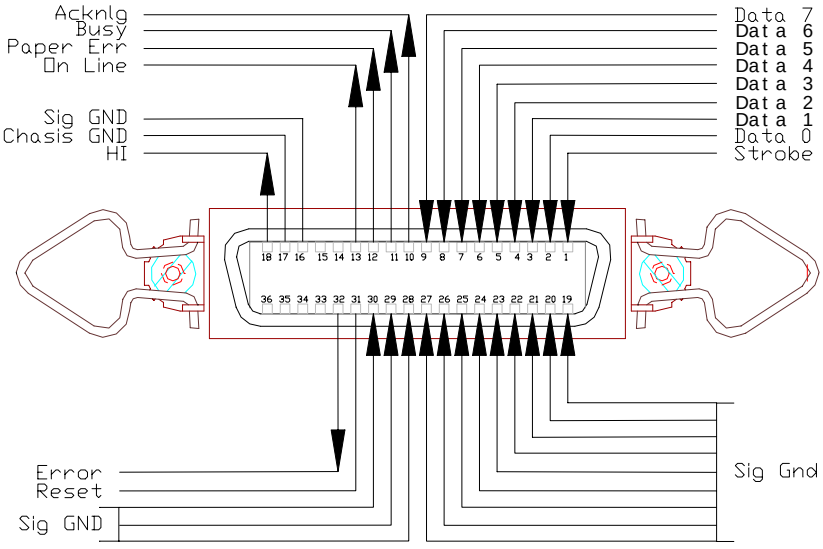
0	16	<SP> 32	0 48	@ 64	P 80	` 96	p 112	Ç 128	É 144	á 160	▒ 176	└ 192	208	224	240
1	17	! 33	1 49	A 65	Q 81	a 97	q 113	ü 129	æ 145	í 161	▓ 177	┴ 193	209	225	± 241
2	18	" 34	2 50	B 66	R 82	b 98	r 114	é 130	Æ 146	ó 162	▓ 178	┬ 194	210	226	242
3	19	# 35	3 51	C 67	S 83	c 99	s 115	â 131	ô 147	ú 163	┤ 179	├ 195	211	227	243
4	20	$ 36	4 52	D 68	T 84	d 100	t 116	ä 132	ö 148	ñ 164	┤ 180	─ 196	212	228	244
5	21	% 37	5 53	E 69	U 85	e 101	u 117	à 133	ò 149	Ñ 165	181	┼ 197	213	229	245
6	22	& 38	6 54	F 70	V 86	f 102	v 118	å 134	û 150	ª 166	182	198	214	µ 230	246
7	23	' 39	7 55	G 71	W 87	g 103	w 119	ç 135	ù 151	º 167	183	199	215	231	247
8	24	(40	8 56	H 72	X 88	h 104	x 120	ê 136	ÿ 152	¿ 168	184	╚ 200	216	232	º 248
9	25	) 41	9 57	I 73	Y 89	i 105	y 121	ë 137	Ö 153	169	╣ 185	╔ 201	┘ 217	233	• 249
<LF> 10	26	* 42	: 58	J 74	Z 90	j 106	z 122	è 138	Ü 154	170	║ 186	╩ 202	┌ 218	234	• 250
11	<ESC> 27	+ 43	; 59	K 75	[91	k 107	{ 123	ï 139	¢ 155	½ 171	╗ 187	╦ 203	▉ 219	235	251
<FF> 12	28	, 44	< 60	L 76	\ 92	l 108	| 124	î 140	£ 156	172	╝ 188	╠ 204	■ 220	236	252
<CR> 13	29	- 45	= 61	M 77	] 93	m 109	} 125	ì 141	¥ 157	¡ 173	189	═ 205	221	237	253
14	30	. 46	> 62	N 78	^ 94	n 110	~ 126	Ä 142	158	« 174	190	╬ 206	222	238	254
15	31	/ 47	? 63	O 79	_ 95	o 111	127	Å 143	ƒ 159	» 175	┐ 191	207	▉ 223	239	255

The ID# for the PC 8 Character Set is (10U).

Parallel Communication (Centronics Cable)

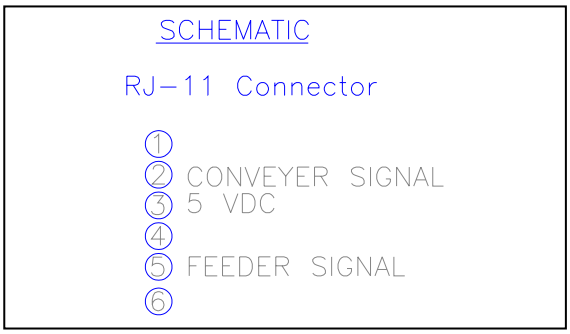
The parallel interface port is a standard 36 pin Amphenol type with two metal wire retaining clips.

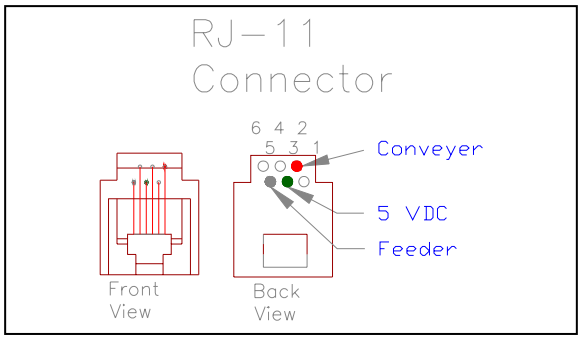
Pin #	Signal	Direction	Description
1	Strobe	In	A Low pulse causes the printer to read one byte of data
2-9	Data 0 -Data7	In	Data lines. Data 0 is the LSB
10	Acknowledge	Out	The printer sends a low pulse to indicate that it has accepted a byte of data and is ready for more.
11	Busy	Out	The printer sends a High to indicate that it cannot receive data to data entry, a full buffer.
12	Paper Error	Out	The printer sends a High logic level to indicate to the computer that it is out of paper.
13	On Line	Out	The printer sends a High logic level to indicate to the computer that it is in an On Line status.
16	Sig Gnd		These pins are tied to signal ground
17	Chassis Gnd		Chassis Ground
18	HI	Out	The printer outputs a High logic level (+5V through a 2.2K ohm resister) on this pin while it is turned on.
19-30	Sig Gnd	In	Signal Interface Ground
31	Reset /Input Prime		The printer may not work when this line is low.
32	Error	Out	The printer sends a Low logic level to the printer to indicate that it is in an error state.



Accessory Port

The Accessory Port allows the printer to work in conjunction with a Conveyor.
Use the Accessory Port to connect the printer to a Bryce Pulse Box (optional) or to a 5 VDC relay connected to the conveyor (See Section Connecting to the Conveyor Port for more information.)





Printer Software

The industrial printer comes with Windows drivers that allow the use of graphics and a virtually unlimited number of True Type Fonts. Unlike printing with ASCII text: a non-GUI operating system that is normally associated with operating systems like DOS / Unix / Linux, where the printer draws on the internal fonts, Windows downloads a representation of the fonts for the printer to make use of.

Driver Information for DOS / Unix / Linux or Windows 3.0, 3.1 & 3.11

Most software packages allow you to select or setup a printer driver. Use one of the following printer drivers.

Generic Printer

DOS Text Printer

Typewriter

Teletype

TTYCRLF Printer

TTYCR Printer (This requires the Setup Menu CR = CR + LF option to be turned on)

If none of these choices are available one of the following may work:

HP Laserjet Series II or any Laserjet II listed (excluding Postscript)

HP Laserjet 4

Note: When using DOS set the MODE COMMAND!!!

Type the MODE command at the DOS prompt or add the MODE command to the AUTOEXEC.BAT file. The AUTOEXEC.BAT will load the command when the computer is first booted up.

Example:

When printing to the parallel port load MODE LPT1:,,P

When printing to the serial port load MODE COM1:9600,N,8,1,P

Note: The parameter settings may vary from the preceding examples. For DOS version 5.0 or later, a **,,B** may be substituted for the **,,P)**

MICROSOFT WINDOWS ™ Applications Software Driver Information

Microsoft Windows 3.xx Software Driver Information

When using Microsoft Windows 3.0, 3.1 or 3.11, select the Generic / Text printer driver. The Generic / Text printer driver is the least complicated and straightforward driver to use with the printer. Generic / Text printer drivers only print text and cannot support the printing of graphics. Some software may list a Bryce or BOS driver to use with that software package. Contact the software company for specifics on the printer driver before using it for it may have been written specifically for a particular model of Bryce printer.

Microsoft Windows 95/98, NT 4.0 & XP/2000 Software Driver Information

Printer Drivers for the aforementioned operating systems are included with the printer. To take advantage of the printers' graphics capabilities and of True Type Fonts the right printer driver has to be installed. Once the driver is installed for Windows 95/ 98, NT 4.0 or XP/2000 you are ready to print text and graphics. Use the printer drivers to also set the paper size, margins, orientation, and to even configure some of the printers' control panel settings. The printer driver will override most control panel settings in the printer.

Updating the Printer Drivers

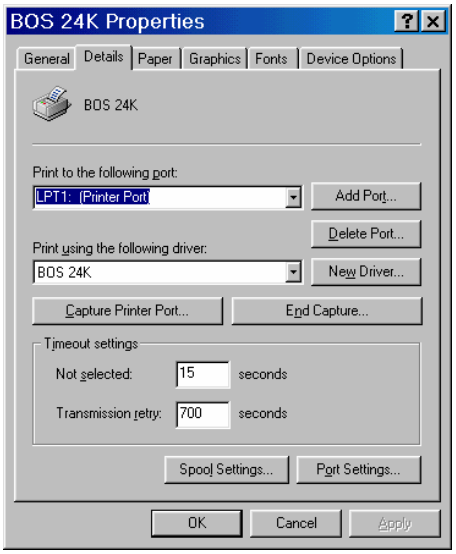
Periodically updates of printer drivers are made available on the World Wide Web. To obtain the most recent drivers or additional drivers go to **http://www.BryceUSA.com**.

Microsoft Windows Software Driver Information

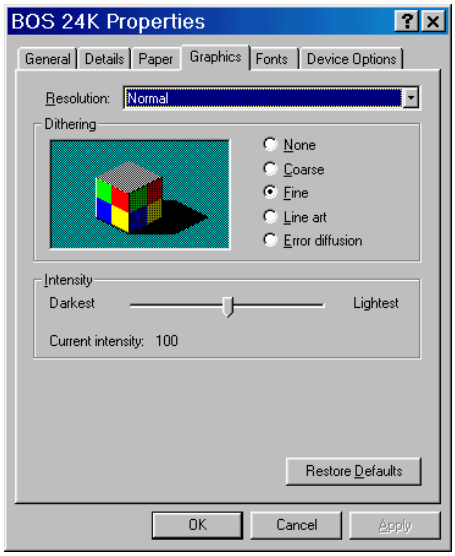
When using Microsoft Windows 3.0 or later, select the Generic / Text printer driver.

Microsoft Windows95/98 Software Driver Information

Changing the Print Driver Properties might have to be made for the printer to work with different software packages in the Windows95/98 operating environment.



1. Click START ... SETTINGS... PRINTERS
2. Highlight the printer driver being used (usually 9K-L/13K or 24K/30K)
3. Click FILE ... PROPERTIES
4. Click on the DETAILS tab
5. Click on PORT SETTING ... make sure that none of the boxes are checked. Click on OK
6. Click on SPOOL SETTING… check the box for “Print directly to printer”.
7. Check the box for “Disable bi-directional support for this printer”. Click on OK.
8. Check the GRAPHICS tab when pictures are missing or printed out incorrectly. **Note**: Some software may require clicking on an OPTIONS button to open a dialog box of check boxes options.
9. Click on APPLY once settings are correct.



Software Interface sample:

Access 2000 for Window 98

Select **Open** from the **FILE** menu.

Select the **.mdb** database file or compatible database file.

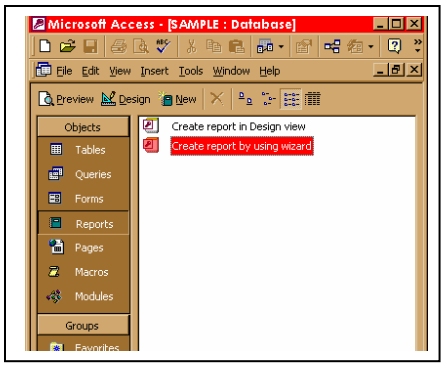
Select the **OK** button from the box.

The window with the database name will appear.

Select **REPORTS** from the side tab from the box.

Select the **Create reports by using wizard** to insert the fields for printing. Select the **FINISH** button after going through and selecting all the options.

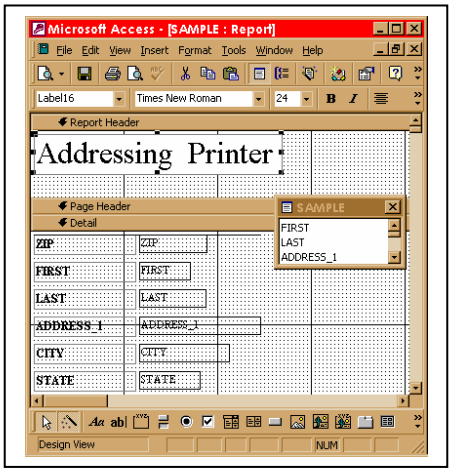
The REPORT WIZARD will display the Records from the selections made. The tabular layout is recommended to select as the easiest to modify and redesign.



Select **Design View** from the **VIEW** drop down menu.

Click on the label box to remove or modify the text. Use the Header and Footer to print a return address or logo on all pages.

Go to the **Details** section in **DESIGN VIEW**. Click the mouse on the Label & Text Boxes. The modifier boxes will appear. Now move and change the Label & Text Boxes on the form. **Note**: To hide the Label Boxes in front of the Text Boxes right click the mouse to bring a drop down box. Select the **FORMAT TAB**. Set the **Visible** property to **No**. Delete the Label Boxes the in front of the Text Boxes if they are not required.



After the Text Boxes have been moved and the Label Boxes have been hidden or deleted then check the results by selecting **Layout Preview** from the **VIEW** menu. Make any necessary adjustments by switching back to **Design View**.

In **Design View** make a right click of the mouse on the form to bring up a **PROPERTIES** dialog box.

Select the **Properties** option. A **SECTION DETAIL** dialog box will appear. Change the **Force New Page** option to **After Section**. Now only one record will print on a page.

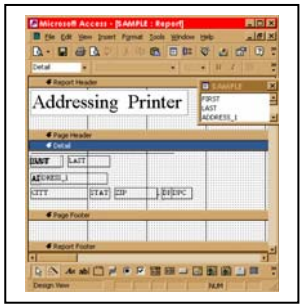
Select from the **VIEW** menu **Layout Preview**. Only one record per page will appear. Use the arrows on the Data Control to scroll through the records.

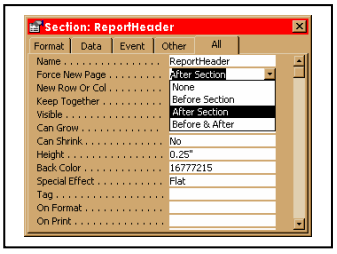
Select from the **FILE** drop down menu the option **Page Setup**. A PAGE SETUP dialog box will appear.

Select the **PAGE** tab from the **PAGE SETUP** Dialog box. Select the **PRINTER** button to verify the correct printer driver is selected.

Select the correct size of the media.

Select the **MARGINS** tab and set the margins to move the records on the piece.





Click on the **OK** button when the settings look correct.

The view from **Page Layout** will show how the records will look when printed out.

Select from the **FILE** drop down menu **Print** when the Page Layout is correct. Note: Spacing in Access is fixed between the fields in the Text Boxes.

Computer setup sample**:** **IBM Mini's (System 34, 36, 38) & AS400)**

To use the BOS 30K with any IBM minicomputer or mainframe, it is necessary to interface through some kind of protocol converter. This may be one of two types of systems; either an IBM compatible micro with an emulation card, or a stand alone protocol converter such as is available from Black Box Corp. in Pittsburgh, PA (i.e., model PQ-6 RO). In either case the installation is very similar.

1. The protocol conversion device must be connected to the IBM computer with the appropriate cable.

2. After deciding on a free work station address to be used for the BOS 30K, the system configuration must be altered to setup the work station address and port as an IBM 5256 printer.

3. The emulation system must be setup at the same workstation address and must be setup for IBM Proprinter II emulation.

For a system 36 installation, with IBM advanced emulation, the following is the correct procedure to follow on the PC:

A. Boot the PC with DOS
B. Running off the advanced emulation program disk, type "Config DP5250.dat"
C. Select 2 Emulation sessions
D. Select the appropriate keyboard
E. Set workstation addresses for the two sessions, as configured on the system 36
F. Set 5256 Printer Emulation
G. Select IBM Proprinter II
H. Save profile data and exit

4. A procedure must be written and run which sets the printer port for the page length of 6 lines (BOS 30K with LCD SETUP MENU to set up the ADDRESS SETUP to 6).

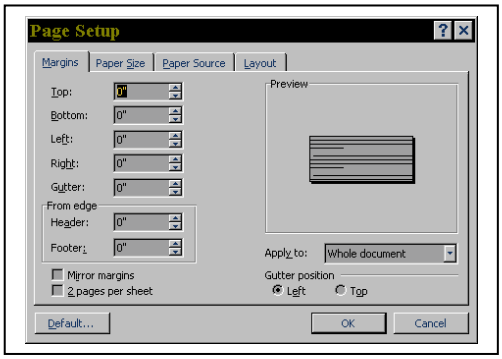
5. An RPG program will probably be necessary on the system 36 to produce a data format which is "one-up" label compatible.

6. You may now print address lists on your BOS 30K.

Software Interface sample:

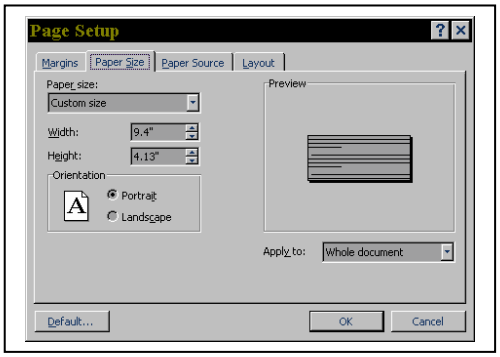
Word 2000 for Window 98

Select **New** from the FILE menu. A NEW dialog box will appear on the screen.
Select **Blank Document** from the GENERAL tab.



Select **Page Setup** from he FILE menu. A PAGE SETUP dialog box will appear on the screen.

Select the **Margins** tab, and set all margins to zero (0).

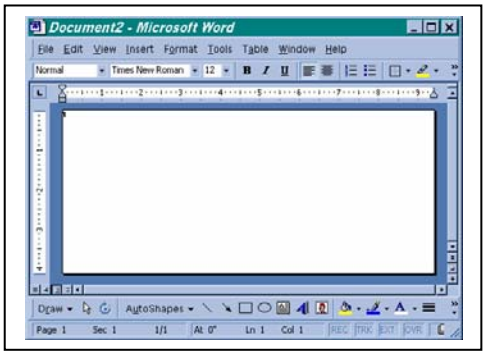


Select the Paper Size tab, then select one of the standard sizes or **Custom Size** from the Paper Size text box.

Note: Custom requires changing the Width and Height in the text boxes to match the size of the piece or setting the size required for printing the records.

Select OK. After you select OK, a warning may appear if the printer wrong printer is selected. Click on the **Ignore** button when this is the case.

Select the **Print Layout** from the VIEW menu. Now the windows screen is in a "what you see is what you get" (WYSIWYG) mode.

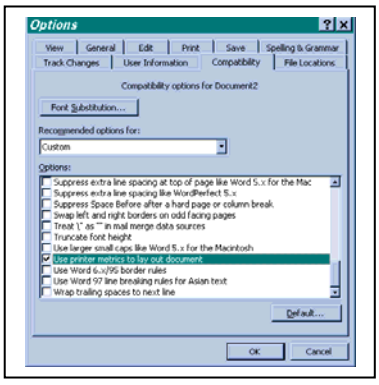


Select **Options** from the TOOLS menu. A OPTONS dialog box will appear on the screen.

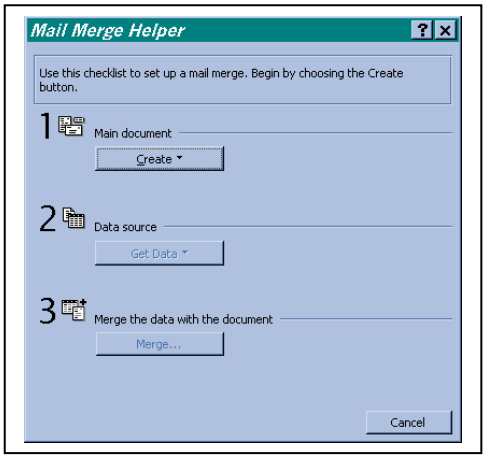
Select the Compatibility tab from the OPTION dialog box.

Select **Custom** from the RECOMMENDED OPTION FOR: pull down list box.

From the OPTIONS: list check the box next to the **Use Printer Metrics to layout document**. Remove the check from all other options in the list.


Options
View
General
Edit
Print
Save
Spelling & Grammar
Track Changes
User Information
Compatibility
File Locations
Compatibility options for Document2
Font Substitution...
Recommended options for:
Custom
Options:
Suppress extra line spacing at top of page like Word 5.x for the Mac
Suppress extra line spacing like WordPerfect 5.x
Suppress Space Before after a hard page or column break
Swap left and right borders on odd facing pages
Treat '1' as "" in mail merge data sources
Truncate font height
Use larger small caps like Word 5.x for the Macintosh
Use printer metrics to lay out document
Use Word 6.x/95 border rules
Use Word 97 line breaking rules for Asian text
Wrap trailing spaces to next line
Default...
OK
Cancel

To make a Mail Merge select **Mail Merge** from the TOOLS menu. The Mail Merge Helper dialog box similar to the one to the right will appear.

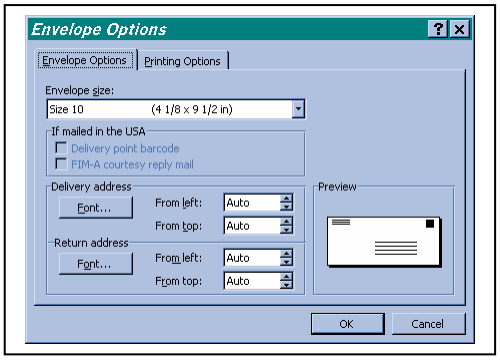


Select the **Create** pull down menu.

Select **Form Letter**. Select the **Active Window** as the document that you wish to use.

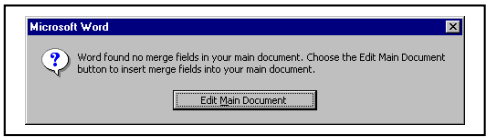
Now the Data Source will allow you to select Get Data from the Mail Merge Helper. The Get Data dialog box will appear.

Select the file you wish to merge with your MS Word document. Windows will need further verification of the type of database files in some cases. A **Confirm Data Source** dialog box will appear with the options to select from. Highlight the correct option and select OK.



A "**Envelope Options**" dialog box will appear. Check the Envelope Size drop down box matches your selection. Adjust the measurements where the records will print, font size and type. Select OK button when the form looks correct. You will get a message similar to the one below stating "Word found no merge fields in your main document. Click on the **Edit Main Document button**.

Move the cursor to the position you would like the address to begin.


Microsoft Word
Word found no merge fields in your main document. Choose the Edit Main Document button to insert merge fields into your main document.
Edit Main Document

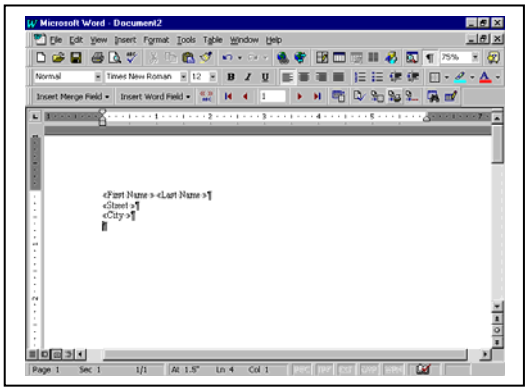
Select **Insert Merge Field** from the toolbar.

Select the fields to insert them on the form.

Select the OK button. A new Word Document will appear with the fields that were selected.

Select the **Merge** or **Merge to Printer** icon from the toolbar.

Your page should look similar to the last example below.



The Print dialog box will appear.

Make sure the right Bryce printer is selected.

Click OK to print.

Shipping Dimensions and Weight

Height:	16 inches	40.64 cm
Width.	30 inches	76.20 cm
Depth:	24 inches	60.96 cm
Weight:	87 lbs. (39.5 kg) including accessories.	

Dimensions of Feeder Assembly

Height:	14 inches	35.56 cm
Width.:	24 inches	60.96 cm
Depth:	19 inches	48.26 cm
Weight:	29 lbs. (13.2kg) including Feed Ramp	

Electrical

Voltage:	Selectable voltages: 100v, 120v, 220v, and 240v
Fuse Type (100 – 120 volts AC + or - 10%):	One 3 AG 2 Amp Slo-Blo fuse, at 250 volts, is required/provided.
Frequency:	50 / 60 Hertz. + or - 3 Hz.
Fuse Type (220 – 240 volts AC + or - 10%):	Two 5 x 20mm. 2 Amp Slo-Blo fuses, at 250 volts, one for each leg, is required/provided.

Environmental Conditions.

Operating. (Power On.),	Temperature. 55.F - 95.F (12.C - 35.C), Humidity. 8% - 80% Die maximale Umgebungstemperatur betraegt 35C.
Non Operating. (Power Off.),	Temperature. 42.F - 100.F (5.C - 40.C), Humidity. 10% - 90%

Media Thickness

Minimum	0.003 inches	(0.076 mm)
Maximum	0.5 inches	(12.7 mm)

Effective Print Area

Maximum Height of print area – 3 inches (7.62 cm), can be split into 2 – 1½ inch (3.81 cm) blocks
Maximum length of print line – 13 ½ inches (34.29 cm)

Print Density and Resolution. **Black**

Super Draft	600 x 150 Dots per inch
Draft	600 x 200 Dots per inch
Letter	600 x 300 Dots per inch
Executive	600 x 600 Dots per inch

Printing Speeds in #10 envelopes per hour

Print Quality	Min Throughput / Hr	8" Media Throughput / Hr
Super Draft	24,000	30,000
Draft:-	19,000	22,000
Letter:-	13,000	15,000
Executive:-	6,500	7,500

Fonts

12 Internal Fonts that are scalable Unlimited TrueType Fonts (downloadable)

Point Size

Smallest	Largest
4 point	30 point

The Interface Panel

The interface panel is located on the side of the machine. It contains the main power switch, the power receptacle and fuse. The interface ports (parallel and USB) are the interface connections between the 30K and your computer.

1. Connect the line cord from the printer receptacle to a properly grounded outlet box. Do not use an adapter plug. Avoid using outlets that are controlled by wall switches and shared with other equipment.
2. Connect the interface cable from the computer to the appropriate connector on the printer interface panel. The typical cable length is six (6) feet long (182. 9 cm) for parallel and fifteen (15) feet (457.2 cm) long for serial.

DELIVERY POINT BAR CODE

NAIC Certification

This Address Printer is equipped with firmware for printing the United States Postal Service (USPS) Delivery Point Bar Code (DPBC). The printer is Certified by the National Address Information Center (NAIC). Certification from the NAIC indicates the printed POSTNET Bar - Code meets the required standards for letter size mail to receive USPS Delivery Point Bar Coded rates.

Delivery Point Bar Code

A Delivery Point Bar Code is comprised of a total of 62 bars: Framing Bar + ZIP + 4 Digits + Delivery Point Digits (2 digits) + Check Digit + Framing Bar. The Address Printer uses the data sent down on the last line to print the DPBC.

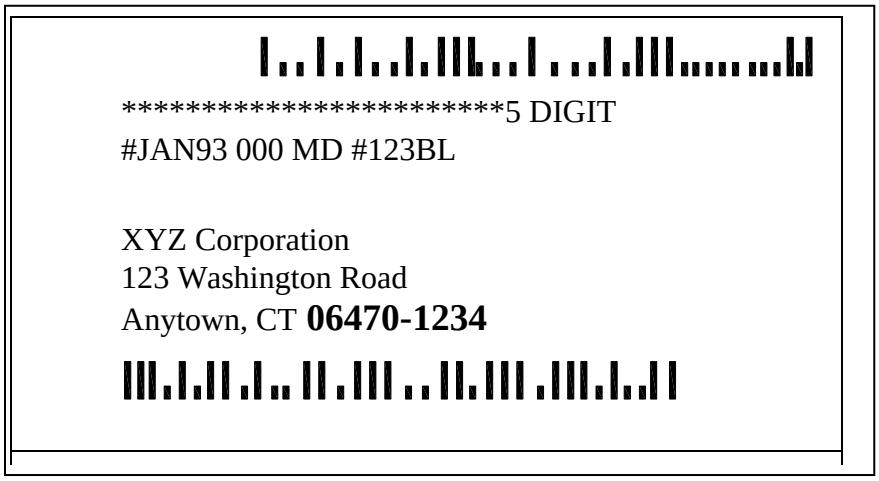
Alternate Address Formats

The option to send the Address Printer a ZIP + 4 + 2 or ZIP + 4 + 3 address to print a Delivery Point Bar Code is available. Only the addresses with ZIP + 4 (9 digits) or ZIP + 4 + 3 (12 digits) digits are allowed by the USPS to appear in the address block.

Customizing the location of the Barcode

Use the following 11 or 12 digit formats to print the barcode in any desired location on the media:
~~ZIP + 4 + 2 (e.g. ~~98765-123412) or ~~ZIP + 4 + 3 (e.g. ~~98765-1234123)
Note: The only characters that can precede the "~~" tilde tilde characters are blank spaces.

Example of using the **Tilde Tilde** (~~) command for customizing the bar code location in the address block while placing a USPS barcode below the address.



The **Tilde Tilde** (~~) code barcode will print on a line when the first two characters in the line are two **tilde tilde** characters (**~~)** followed by the digits that represent the desired barcode.

ASCII text sent to produce the above example is:

~~123456789012 (Tilde Tilde Code & Barcode data sent)
**********5 DIGIT
#JAN93 000 MD #123BL

XYZ Corporation
123 Washington Road
Anytown, CT **06470-1234~123** (USPS information sent)

Valid Address Formats

Address ZIP Codes	Data Sent to Printer	Printed in Address Block	Bar - Code Printed
ZIP + 4 + 2*	98765-1234~12	98765-1234	DPBC
ZIP + 4 + 3*	98765-1234~123	98765-1234	DPBC
ZIP + 4 + 3	98765-1234123	98765-1234123	DPBC
Illegal Format			
ZIP + 4	98765-1234	98765-1234	9 Digit Bar - Code
ZIP + 4 + 2	98765-123412	98765-123412	No Bar - Code

* Add the Tilde (~) after the ZIP + 4 digits so the 2- or 3 - digit add on will not be printed in the address block.

ZIP + 4 + 2

The Address Printer will determine the correction digit and print the DPBC according to the ZIP code received. Using the ZIP + 4 + 2 format requires that the Tilde (~) character be sent between the ZIP + 4 and 2- digit characters. Only ZIP + 4 digits will be printed in the address block.

ZIP + 4 + 3

The Address Printer will print the DPBC according to the ZIP code received. Two formats of printing the Zip Code in the address block are available. First option is to print all the digits of the ZIP + 4 + 3 in the address block. Second option is to only print the ZIP + 4 digits in the address block, by placing the Tilde (~) character between the ZIP + 4 and 3- digit characters.

PLANET Code Bar Code

Postal Alpha-Numeric Encoding Technique (PLANET) provides features that are not currently available with the POSTNET barcode. PLANET bar codes are broken down to a list of planets.

The following is a list of each planet and the applications supported by that planet's particular PLANET bar code.

- **Jupiter**- A 12-digit barcode containing mail piece rate, presort bureau origin, and customer identification.
- **Mercury** - A 12-digit barcode used for CONFIRM or CIPS service.
- **Earth**- A 12 digit barcode used for sorting foreign mail.
- **Pluto**- A 12 digit barcode for automated address correction requests.
- **Saturn**- A 12 or 14 digit barcode for RTS or CFS mail.
- **Neptune** - A 12 digit barcode for mailer use.
- **Venus** - A 12 or 14 digit barcode used for electronic tracking.

The PLANET bar codes have the exact same dimensional requirements as POSTNET barcodes. Most PLANET barcodes are placed in the address block portion of the mail piece. Only PLANET **Earth** and **Saturn** barcodes may be printed in the traditional lower right area.

Example of using a PLANET bar code in the address block while placing a USPS barcode below the address.

**********5 DIGIT
#JAN93 000 MD #123BL

XYZ Corporation
123 Washington Road
Anytown, CT **06470-1234**

A PLANET code barcode will print on a line when the first two characters in the line are a **tilde** followed by the **pound** character (**~#)** then the digits that represent the desired PLANET code.

ASCII text sent to produce the above example is:
**********5 DIGIT
#JAN93 000 MD #123BL
~#123456789012 (PLANET Code sent)

XYZ Corporation
123 Washington Road
Anytown, CT **06470-1234~123** (USPS information sent)

EAN-13 / UPC-A Serial Shipping Barcode

The printer has the ability to print a nominal sized EAN-13 and UPC shipping barcode in both the normal or invert mode. The barcode consists of the machine readable barcode on top and the human readable test beneath. The barcode is printed below and to the right of the current position.

The barcode is designed to comply with the standard UCC/EAN Application Identifier standard and utilizes the UCC/EAN-128 symbolism.

To generate a UPC or EAN-13 barcode the digits to be coded must begin with a **~ (tilde)** [Hex 7E] then an **& (ampersand)** [Hex 26] followed with the 12 digits for EAN-13. The printer will automatically calculate the check-digit. Send ten digits and two leading 0's (zeros) are added to generate the EAN-13 barcode.

For the printer to generate a UPC or EAN barcode the data sent must follow the ensuing rules:

- A (**~&**) must be the first two characters.
- The EAN-13 must have 12 digits, the UPC must have 10 digits.
- Spaces are not allowed within the EAN / UPC information.
- The EAN barcode information must be terminated with end of line characters (CR [Hex 0D] or LF [Hex 0A]).
- Only use ACII text or use Courier 12 pt when using widows to send the EAN / UPC barcode command and information.

Example: **To print a EAN-13** **~&123987654321**
To print a UPC **~&0198765432**

Note: If an illegal format is received the command will be ignored and only the text will print.

Prefix (P1, P2, P3)	**Code Number / Manufacturers Number / Item # (X)**	**Check-digit**

EAN-13	P1	P2	P3	X	X	X	X	X	X	X	X	X	Check-digit
UPC-E			P1	X	X	X	X	X	X	X	X	X	Check-digit

The dimensions of the EAN-13 at nominal size are:

- 37.29 mm wide including clear space for margins
- 25.93 mm height - measured down from the top of the line from which it was generated.

The dimension of the UPC-E barcode at nominal size are:

- 22.11 mm wide including clear space for margins
- 25.93 mm height – measured down from the top of the line from which it was generated.

Keep these dimensions in mind when laying out the design for using the EAN-13 Barcode and the UPC-E barcode.

Glossary

cable

Wires that carry the information between the computer and the printer.

Centronic parallel interface

A device for connecting printers and other peripheral devices to a computer. It transmits a full byte at a time.

Character

A printable letter or symbol.

character height

The height of a uppercase letter. A character height is measured in points.

characters per inch

The number of character printed in a horizontal inch. Also called pitch.

character set

The set of characters or symbols that make up a language.

clean print cartridge

Describes the process of removing dried ink from the nozzles of the ink jet cartridge.

configuration

The settings used by the printer to communicate with the computer. Also the internal settings in the printer that control the print job.

control code

The instructions sent to the printer to describe how to perform the print job.

control panel

The buttons and display that are used to manually change the printers settings.

cpi

See **characters per inch**.

data communications

The sending of data from the computer to a peripheral device i.e. the printer.

dots per inch

The number of ink dots printed in one horizontal inch. The larger the number the better the resolution of print.

double feeding

Two or more pieces of media feed at the same time or without separation.

Dpi

See **dots per inch**.

draft quality

Print resolution using 150 dpi which saves ink and allows faster printing of a document.

Drivers

A file used by the computers software to communicate commands and information that the printer needs to layout and print a document.

embedded printer commands

Commands sent in a record or document to instruct the printer to change printing options.

EPROM

Electronic Programmable Read Only Memory

escape character

A special non-printable character (ESC / ➔) used to instruct the printer to change printing options.

escape sequence

Commands sent beginning with the escape character that instruct the printer to change printing options: fonts, page orientation, etc.

feed gap

Opening between the ends of the H-Block Assembly and the Feed Rollers so the media is fed one at a time.

font

A set of printable characters with consistent style and characteristics.

Grounded

A electrical circuit that has a voltage of zero.

Handshaking

A method for the computer to communicate with peripheral devices to ensure complete transfer of information.

hex dump

A printer option that allows all the information and commands sent to the printer are printed as base 16 digits.

Internal test address message

The preprogrammed Address that is printed when the Test Env. button is pressed.

interface cable

The cable that connects the printer or other device to the computer.

interface connector

The connectors on both ends of the interface cable that insert into the interface ports.

internal fonts

Resident or built-in fonts that reside inside the printer.

Jam

See Paper Jam.

letter quality

Print resolution using 200 dpi which saves ink and provides a high quality document.

lines per inch

The number of lines printed in one vertical inch.

Menu directories

The list of available printer controls that appear on the bottom of the LCD display. A directory can contain other directories called sub-directories.

Offline

The printer will no longer respond to information sent from the computer.

Online

The printer will accept and respond to information sent from the computer.

outline fonts

Scaleable printer fonts.

paper jam

When media gets stuck in the printer.

Parity

An error checking method used when communicating between the computer and a peripheral device.

PCL commands

A standard printer language developed of commands to access printer features or options.

point size

A measurement standard for Character Height. One point represents one seventy-seconds of an inch.

Port

See **Printer Interface Port**.

Postal regulations

Rules and guidelines setup by the United States Postal Service (USPS) for mail.

power socket

The socket on the back of the printer where the line cord is connected.

print cartridge

The cartridge that contains the ink for printing.

print quality

The quality of print, such as the resolution, sharpness of the image or font.

printer driver

See **Drivers**.

Record

A collection of related fields that make up the name and address of an individual in a mailing-list file.

sans serif

A font typeface that contains no serifs or finishing strokes on the top or bottom of the characters.

scaleable fonts

Outline printer fonts of characters and symbols that are stored in a mathematical form and are able to be enlarged or reduced.

Spacing

The relative spacing between characters.

Stuffed media

Media that is already filled and sealed for delivery.

sub - directories

A directory within a directory.

Troubleshooting

The process of finding the cause of a problem so that a solution can be found.

USB

See **Universal Serial Bus**.

Universal Serial Bus

A device that allows a low asynchronous data transmission of 1.5 or 12 megabits per second (mbs). A constant isochronous data stream transmission of 100, 200, or 400 mbs. The device has automatic device detection and installation for a plug and play experience. Also it supports daisy chaining and branching for hot plug and play capability without disturbing current applications that are running. USB also supports the SBP (serial bus protocol) which allows data transfers to PC peripherals. SBP allows bigger files to be sent asynchronously across the bus. The standard distance of a peripheral to a pc is 5 Meters.

Options & Supplies

The following list of option & supplies are available through your local Bryce dealer.

Alternative Kits

	Description	**Part Number**
Kit:		
	Pulse Box USA (for conveyers)	01-90000-201
	30K Feeder Assembly	01-00902-201

Replacement Parts

Feed Ramp Assembly	03-10127-201
Cartridge Capping Station	03-40000-201
Printer Driver Kit	05-00901-201
5 Replacement Tires Kit (Crepe Finish)	05-00906-201
Outer Fence (Feeder Assembly)	10-20737-001
Inner Fence (Feeder Assembly)	10-20738-001
Media Support Wedge	10-20744-001
Separator Finger	11-00022-001
Top Cover	11-00156-001
Replacement Tire (Crepe Finish)	12-20005-002
Feeder Bracket Weldment	14-00122-001
6-32 x ¼ Flat Head Screws	60-05234-001
Quick Release Pin	63-25015-001

Replacement Ink Cartridges:

Versatile Black C8842A	40-00010-001
Spot Color Red C6168A	40-00011-001
Spot Color Green C6169A	40-00012-001
Spot Color Blue C6170A	40-00013-001
Spot Color Yellow C6173A	40-00014-001

Bryce

Office Systems

30K

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